FASTFACTS ON ALCOHOL

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INTRODUCTION TO FASTFACTS ON ALCOHOL

Alcohol has been part of human society for centuries.Thousands of years ago, our ancestors brewed beer, made wine and distilled liquor for consumption at ceremonies and social events. Today, the drinking of alcoholic beverages is a well-accepted part of Canadian life.

Perhaps because of its popularity, alcohol has been the subject of a great deal of interest and research during the past few decades. Investigators have looked at both how it contributes to our cultural and economic existence and how it creates personal and social problems through misuse.

As there is a great deal of data available from local, national and international sources, it can be difficult for lay persons to quickly find authoritative information on alcohol. Students, speechwriters, businesses and community organizations find they often waste considerable time and effort searching out a variety of sources to locate the specific information needed.

The Addictions Foundation of Manitoba (AFM) produced this edition of *FastFacts on Alcohol* to provide a concise package of factual information on alcohol and its impact on our society. While this document is not intended to be a comprehensive or exhaustive analysis, it is hoped that readers will find it useful for answering questions on alcohol. Valuable sources are also provided in the form of endnotes.

As a quick reference tool, *FastFacts* highlights many questions and topics about which staff at the AFM are frequently asked. Much of the information contained in this publication comes from secondary sources, and every effort has been made to identify the original source. The reader is advised to use these original sources whenever possible to confirm the context in which the information is given.

In addition to these secondary sources, *FastFacts* also uses data derived from the AFM's own client-based information system. This system provides AFM programs and external agencies funded by the AFM with current, client-related data on demographic and social trends.

For additional information on this *FastFacts* document or on addictions in general, contact the AFM library at (204) 944-6233 or one of the offices listed on the back cover of this book.

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Thank you to the staff at the Statistics Canada Library in Winnipeg, who were helpful in sourcing information about alcohol use by Canadians.

Chapter 1
HISTORICAL FACTS ABOUT ALCOHOL

How long has alcohol been around?

No one knows the exact origin of alcohol, but there is evidence that beer and wine consumption dates back to the Stone Age (c8000-9000 b.c.).[1]

Where did the word "alcohol" come from?

The word "alcohol" is believed to be derived from the Arabic al kohl.[2]

What were some of the early uses of alcohol?

Some civilizations worshipped a god of wine, including the Egyptians (Osiris), the Greeks (Dionysius) and the Romans (Bacchus). Wine was sometimes poured on the ground or on the altar and drank by priests as part of early rituals. Even the Bible includes references to sacrifices including wine.[3]

Eventually, the drinking of wine spread and alcohol became a regular part of meals. By the Middle Ages, alcohol use permeated all social events, including births, marriages, deaths, the crowning of kings, diplomatic exchanges, treaty signings and councils.[4]

Alcohol was also used for medicinal purposes, as an antiseptic, an anesthetic and in combinations to form salves and tonics. It was also recognized as a mood changer and nature's tranquilizer.[5]

How is alcohol made?

Alcohol forms from a natural fermentation process in which yeasts combine with plants, such as potatoes, fruit or grains.[6] All that is needed is a mixture of water, vegetable sugars or starches, a warm spot and time. In this way, nature can produce a maximum strength of 14% alcohol content.

Distillation, a process developed by an Arabian physician, Rhazes, in the tenth century, can produce an alcohol content of almost 93% if it is refined enough times. Distilled spirits were used as a basic medicine until the sixteenth century when they gained popularity as a drink.[7]

Has there always been a problem with over-consumption of alcohol?

In ancient Greece, "drinking captains" were appointed to supervise excessive drinking. In 81 a.d., a Roman emperor concerned with widespread drunkenness ordered the destruction of half the vineyards. In England, the "Act for Repressing the Odious and Loathsome Sin of Drunkenness" made intoxication a statutory offence in 1606.[8]

During the "Gin Epidemic" of 1720 to 1750 in Britain, distillers produced strong, cheap and plentiful spirits. Gin became highly popular among the urban poor and resulting problems grew to such an extent that Parliament passed an act in 1751 putting a high tax and restrictions on the sale of strong spirits to discourage consumption.[9]

When was alcoholism first considered to be a disease?

In 1804, Dr. Thomas Trotter, an Edinburgh physician, wrote *An Essay, Medical, Philosophical, and Chemical, on Drunkenness and Its Effects on the Human Body*, in which he states: "In medical language, I consider drunkenness, strictly speaking, to be a disease, produced by a remote cause, and giving birth to actions and movements in the living body that disorder the functions of health."[10] Widespread and organized treatment for alcohol problems did not develop until much later, with a rapid increase in the United States in the 1970s.[11]

Over the past 15 years, various authors in the addiction field have proposed biopsychosocial models of addiction. There now appears to be broad consensus that complex interactions between various biological, psychological and social factors appear to contribute to the development of addiction problems.

Did native populations consume alcohol before European colonization?

The Māori of New Zealand, the Inuit people of Canada, the Trukese of Micronesia and many Native American Indian Tribes are recognized as indigenous peoples who did not develop alcoholic drinks.[12] The native population of the territory

that would eventually form the United States did not use alcohol, although some tribes developed weak beers or other fermented beverages generally used for ceremonial purposes only.[13]

When did alcohol come to North America?

The Spanish missionaries brought grapevines to North America and were making wine in California long before the United States formed. Alcohol accompanied the passengers on the Mayflower when it landed in Plymouth in 1620, according to the ship's log. The Dutch opened the first distillery on Staten Island in 1640. Over time, Jamaican rum, followed by backwoods whiskey and sour-mash bourbon, became popular, as well as beer and wine.[14]

After the arrival of Europeans, alcohol played a significant role in the North American fur trade and had a dramatic impact on Canada's aboriginal people.[15] Considerable evidence exists to show that early settlers imbibed, frequently to excess, in the years prior to 1840. The first brewery in Canada was reportedly established in 1668. However, most early settlers drank whisky made from wheat, rum imported from the Caribbean or brandy from France.[16]

Where did settlers drink?

Heavy drinking often took place at festivals, special events, elections and pioneer "bees" at which people came together to raise a barn or build a house. These bees had an important social function as well.[17] Taverns and inns were also popular for drinking as they provided the venue for news from travellers as well as a place for discussion and debate. Prior to the temperance movement, there were a large number of taverns. For example, the first official census of Upper Canada in 1851 counted one tavern for every 478 people. In 1995, in the heart of Metropolitan Toronto, there was one licenced bar or restaurant for every 600 residents.[18]

How much did settlers drink?

Based on figures from the 1851 census, it is estimated that per capita consumption of absolute alcohol by those settlers who did drink was perhaps 25 to 30 per cent higher than current consumption.[19]

The following figures reflect estimated per capita consumption in gallons of absolute alcohol from 1880 to 1893:[20]

	1880	1885	1890	1893
Manitoba	.337	.764	.531	.540
Canada	.390	.612	.575	.479

When did Prohibition take place?

THE AMERICAN EXPERIENCE

The traditional American temperance movement began in the early to mid-1800s in response to the increasing problems with alcohol abuse. Contrary to popular belief, the movement did not start as a prohibition effort. Over time, their approach moved from condemning the excessive use of distilled liquor to condemning consumption of any type of alcohol. In 1919, Congress passed the Eighteenth Amendment, making it illegal to manufacture or sell alcoholic beverages. After its repeal in 1933, Prohibition was generally viewed as a failure. The problem of alcohol abuse was still there compounded by the development of a huge underground market.[21]

THE CANADIAN EXPERIENCE

The Canadian temperance movement, which also had its roots in the early 1800s, was roughly modelled on those in Britain and the U.S. The former never achieved Prohibition and the latter did so later than Canada. Similar to the American experience, early temperance societies were essentially "anti-liquor" societies. By 1840, this had evolved into a stance against alcoholic beverages of any sort.[22] These societies were also social organizations and took over many of the main functions of taverns, such as putting on parties and providing a meeting place where politics and local affairs could be discussed.[23]

The first vote on Prohibition in Canada was won in New Brunswick in 1856. Outside of Quebec and a few large cities, a large part of the country was legally dry by the mid-1890s. Prohibition came to all provinces during the First World War, with introduction varying from 1915-1917.[24] National Prohibition was imposed under the War Measures Act in 1917. After the Act was allowed to lapse

in 1919, Prohibition ended by plebiscite in Quebec followed by British Columbia in 1921. Ontario was next (1923) followed by Manitoba and Alberta (1924), Saskatchewan (1925), New Brunswick (1927) and Nova Scotia (1929). Prince Edward Island chose to remain dry until 1948.[25]

Where did Canadians get alcohol during Prohibition?

While bars and taverns were closed, breweries continued to make beer, supposedly for export, and "near beer." The latter, also called temperance beer, had 2.5 per cent alcohol and was sold extensively in British Columbia, Saskatchewan and Manitoba. Liquor made by distillers in Ontario and Quebec that was supposedly shipped to Cuba or Mexico actually went to bootleggers in the U.S. or Ontario and other Canadian provinces.[26]

Homemade wine and liquor became a popular source of supply. During Prohibition, there was a sharp increase in convictions for illicit stills, with Saskatchewan claiming 60 per cent of convictions in Canada. It was estimated that there were 200,000 convictions in the province in 1921.[27]

Another loophole was the prescription of alcoholic beverages by physicians. Alcohol had been frequently prescribed before Prohibition for a variety of ailments and was viewed as legitimate medicine. Prohibition resulted in a flood of prescriptions for alcohol and soon governments were selling more alcohol, through physicians, than any bootlegger. By 1923, the Ontario government had sold nearly $5 million worth of alcohol by prescription. In 1923-24, some 810,000 prescriptions were issued.[28]

What did Prohibition accomplish in Canada?

Although Prohibition was viewed as a social and legal failure, it significantly reduced rates of drunkenness and deaths from alcoholism and liver cirrhosis. Ownership of "the alcohol problem" passed from temperance movements to governments, who brought in limited access to alcoholic beverages through provincially controlled commissions.[29]

CHRONOLOGICAL HISTORY OF ALCOHOL LAWS IN MANITOBA

PRIOR TO 1870
Hudson's Bay company controlled the sale of liquor through outposts.

1870-1916
Licence system operated through hotel bars and clubs.

1916-1924
Prohibition implemented under the Manitoba Temperance Act.

1924-1928
Liquor Control Commission (LCC) provided home delivery of limited quantities to persons who had been issued a permit.

1928-1956
LCC switched to a "cash and carry" system. Licenced hotels and men-only beer parlors were permitted to sell beer by the glass.

1934
Beer vendors in hotels came into operation.

1956
New Liquor Control Act permitted the sale of wine, beer and spirits in mixed premises.

1970
Age to buy liquor was reduced from 21 to 18 and the first self-serve liquor stores opened.

1994
Privately owned retail wine stores, which are permitted to open for business on Sundays, were licenced.

AUGUST 1, 2001
Liquor retail stores and retail beer vendors are permitted to open on Sundays from noon to 6 p.m. Beverage rooms are permitted to open on Sundays from noon to midnight.

Chapter 2

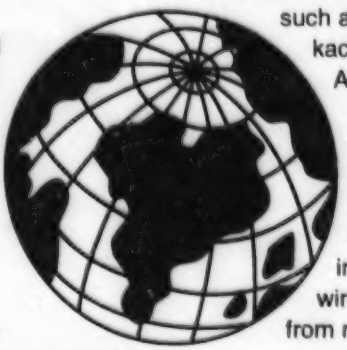
FASTFACTS ABOUT ALCOHOL FROM AROUND THE GLOBE

THE INTERNATIONAL PICTURE

(The following section quotes heavily from the World Health Organization's "Global Status Report On Alcohol" released in December 1999.)

How do the negative effects of alcohol compare to other major social problems around the world?

According to the World Health Organization (WHO), alcohol-related death and disability costs to life and longevity exceed those caused by tobacco and are on par with the disease burden associated with unsafe sex.[1]



Is alcohol consumption increasing globally?

In most developed economies or wealthy countries, recorded alcohol consumption has been dropping since 1980. However, it has been increasing in developing countries since 1970 and more recently in the countries of the former Soviet Union.

Overall, reported alcohol consumption has been decreasing since the mid-1980s.[2] Men do most of the drinking worldwide.[3]

Generally, what is happening around the world regarding the production of alcoholic beverages?

The production of alcoholic beverages has grown steadily worldwide since 1970, according to data from the Food and Agricultural Organization (FAO) of the United Nations. The production of beer and distilled spirits has risen while production of wine has generally fallen. Spirits account for the highest volume of global production in thousands of hectolitres, followed by beer and wine.[4]

Production of alcohol for export is concentrated in developed countries and, in the case of beer and distilled spirits, in the hands of a few large companies.[5] In the former Soviet Union, large amounts of illegal alcohol production and smuggling have reportedly occurred since the break-up.[6]

Beer is available in most countries and mainly comes from transnational producers.[7]

Approximately 54% of distilled spirits are considered to be traditional or local products, although some previously local products are now produced internationally, such as Scotch whisky and tequila. Other local spirits are still made with rudimentary processes, some of which involve the use of dangerous "strengthening" agents, such as battery acid. One example is the kachasu or "kill-me-quick" of Southern Africa.

Wine represents the smallest of the three main types of alcoholic beverages, both in volume and in pure alcohol consumed. However, reported figures do not include informal and home production of wine, as such data cannot be tracked from retail sales or tax records.[8]

Which countries consume the most alcohol per capita?

It is difficult to determine exact consumption levels, as data are not available for every country.[9] The WHO was able to estimate total recorded adult per capita consumption of pure alcohol for 153 countries. Slovenia has the heaviest adult per capita consumption at 15.15 litres followed by Republic of Korea (14.40), Luxembourg (14.35), Czech Republic (14.35), Guyana (14.03) and France (13.74).[10]

Australia is 28th on the list (9.55), United Kingdom is 30th (9.41), the United States is 32nd (8.90), and Canada comes in 49th (7.52). Yemen (0.15) and Indonesia (0.13) represent the lightest adult per capita consumption of pure alcohol.[10]

In which countries is alcohol consumption increasing?

In comparing total adult per capita consumption in litres of pure alcohol in 1970-72 with 1994-96, Lesotho (0.06 to 1.15), China (1.03 litres to 5.17) and Thailand (1.93 litres to 8.37) represented the largest increases. This

reflects percentage increases of 1817, 402 and 334 respectively.[11]

The United States reported a decrease (9.5%) as did Australia (15.4%) and Canada (16.8%).[11]

PREVALENCE & ALCOHOL DRINKING PATTERNS AT A GLANCE AROUND THE WORLD:

United States: Unlike other developed countries, the United States has a relatively high rate of abstention. In the most recent household survey, 51% had used alcohol in the past month (US Department of Health and Human Services, 1995). Men are more than six times as likely to engage in heavy drinking as women. Young people and young adults drink more heavily than the rest of the US population.[12]

Canada: Adult prevalence of alcohol use in Canada has fallen since the 1970s, with 72.3% of the 1994 national survey reporting alcohol use in the previous year as compared to 80.4% in 1978/79. Men, young adults and those with higher incomes, post-secondary education and current employment are more likely to drink.[13]

Caribbean, Central and South America: In these countries, differences between male and female drinking are more marked in general, and annual prevalence of drinking is generally lower, ranging from 32% in Jamaica to a high of 82.9% in Peru.[14]

Eastern Mediterranean: There is very little information on drinking prevalence in the Eastern Mediterranean Region as defined by the World Health Organization. The strong influence of Islam throughout much of the region leads to quite low alcohol use in most countries. Areas with substantial Christian populations are an exception.[15]

Europe: In general, with the exception of the far eastern part (e.g. the Islam-influenced republics of the former Soviet Union), European countries have the highest adult prevalence of drinking in the world. The difference between male and female consumption patterns is small relative to other parts of the world.[16]

South-East Asia: Few general population surveys measuring alcohol consumption have been conducted in the countries of the South-East Asian Region as defined by the WHO. In the region's largest country, India, national survey data were not available. Regional surveys in the Southern and Northern regions of India have found very low rates of alcohol use among women, while the rates of current alcohol use among men range from 34.8 to 58.3%.[17]

New Zealand and Australia: Differences between male and female drinking prevalence rates are slight. Overall rates of drinking are stable or falling. Heavy drinkers generally account for the largest share of alcohol consumption. For example, in New Zealand, the heaviest drinking 10% of drinkers (predominantly male) consumed almost half the total alcohol sold. In both Australia and New Zealand, those under 25 years of age are most likely to be the heaviest drinkers.[18]

China, Fiji, Japan, Korea, Papua New Guinea: Men in these countries are far more likely to use alcohol than women. During the 1980s in Japan, the percentage of men drinking grew by 15% and the percentage of women drinkers nearly tripled. Men in Papua New Guinea typically drink in groups of other men, and consumption of 12 or more bottles of beer at a sitting is typical.[19]

Africa: Available data on drinking in the African region comes mostly from sub-Saharan and anglophone Africa. A pattern of greater drinking among males than females is evident across the region, except among the younger drinkers of some countries. Traditional beverages, such as sorghum-based beer and palm wine, are most popular among older drinkers, while younger drinkers are more likely to prefer malt and barley-based beers.[20]

Have different countries determined a relationship between alcohol consumption and suicide rates?

Studies in Hungary and Portugal have illustrated the close correlations between per capita alcohol consumption and suicide rates. Alcohol dependence was one of the two most prevalent chronic mental disorders among those who

committed suicide in Taiwan, while alcohol abusers in Norway were 6.9 times as likely to commit suicide as the general population.[21]

How do minimum legal ages for alcohol purchase and consumption vary worldwide?

The most common minimum age for legal purchase and consumption of alcoholic beverages is 18, although at least eight countries require drinkers to wait until age 21. They include Belarus, Chile, Egypt, Honduras, Samoa, Solomon Islands, Ukraine and the United States (varies from 18-21 by state).[22]

Another 15 countries permit drinking at age 16. Examples include Belgium, France, Gambia, Italy, Luxembourg, Malta, Morocco, Spain (age 18 in some regions), and Trinidad and Tobago.[22]

Germany and Switzerland permit purchase of fermented beverages at age 16, but drinkers must be 18 to buy distilled spirits. The minimum legal age in Canada is 19, except for Quebec, Manitoba and Alberta where it is 18.[22]

Which countries put warning labels on alcohol bottles?

Warning labels on alcoholic beverage containers are required nationally in at least nine countries (Brazil, Colombia, Costa Rica, Ecuador, Honduras, Mexico, South Korea, United States and Zimbabwe). Research on the US warning label, enacted in 1989, has found that the message is reaching the target audience of young people and heavier drinkers, and that the more exposure drinkers report to the warning, the more likely they have been to adopt harm-reduction strategies related to drinking and driving or drinking when pregnant.[23]

How many countries have permissible levels for blood alcohol content when driving?

At least 54 countries have established permissible levels for blood alcohol content when driving. The most common upper limit is either 0.05% Blood Alcohol Content (BAC) (14 countries) or 0.08% BAC (18 countries). In the United States, 17 states have adopted a standard of 0.08% BAC, while the remainder adhere to a limit of 0.10% BAC. Another eight countries (mostly located in Central and Eastern Europe) have dictated that no amount of alcohol is permissible in the blood when driving.[24]

ALCOHOL IN CANADA

Do many Canadians drink heavily?

Results from the 1998-99 National Population Health Survey (NPHS) published in *Health Indicators*, April 2001 asked Canadians 12 years of age and older to indicate the frequency of having five or more drinks on one occasion in the last 12 months. The survey found that 55.7% had never consumed five or more drinks on one occasion in the past 12 months, 23.8% had consumed five or more drinks on one occasion less than 12 times in the past year, and 19.5% had consumed five or more drinks on one occasion twelve or more times in the past year.[25]

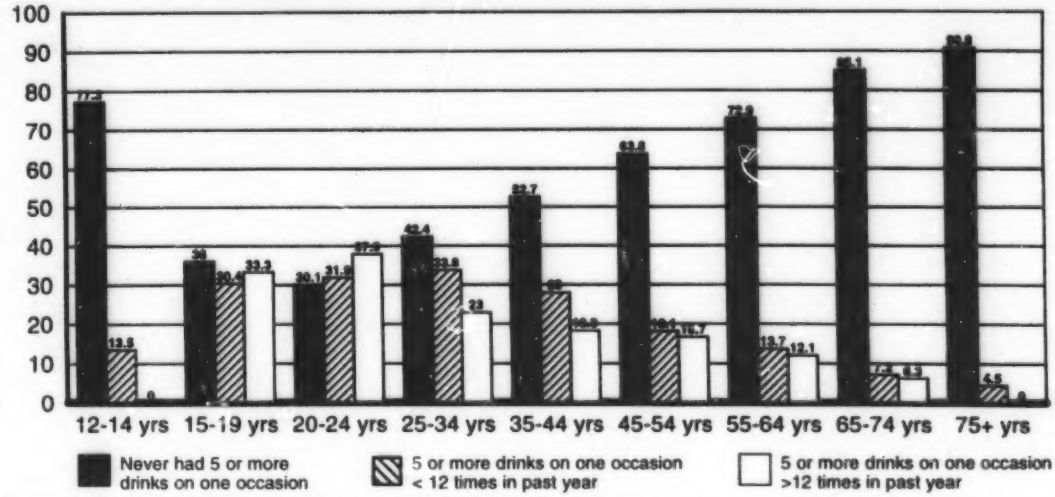
Which age groups drink the heaviest?

The data from the 1998-99 NPHS also indicates that it is people in the younger age groups that report heavier drinking. For example, 33.3% of those in the 15 to 19 age group, 37.9% in the 20 to 24 age group and 23% of those in the 25 to 34 age group reported drinking five or more drinks on one occasion twelve or more times in the past year. No one in the youngest age group (12 to 14) and the oldest age group (75 and over) reported drinking this much. For more data on this topic, see Figure 1 on the next page, which clearly shows that the older the age group, the more likely it is that respondents never consumed five or more drinks on one occasion in the past year.[26]

Do some Canadians refrain from drinking alcoholic beverages?

Yes. The 1996-97 NPHS found that 13.5% of respondents age 15 and older reported themselves to be former drinkers and 9.7% were abstainers.[27]

Figure 1: Frequency of Drinking 5 or More Drinks on One Occasion in the Last 12 Months



Source: Statistics Canada. *Health Indicators*. April 2001. Catalogue no. 82-221 XIE.

What are the characteristics of those who consumed alcohol at least once in the past 12 months?

Rates of past year drinking as reported in the 1996-97 NPHS were highest among men (81.6% versus 72.2% of women), those in the 20 to 24 age group (85.7%) and those in the 25 to 34 age group (83.2%). Past year drinking rates were also higher among those in higher income and education brackets.[28]

How are people affected by other people's drinking?

Almost half of the people surveyed in the 1993 General Social Survey (43.9%) say they have had problems from other people's drinking, such as being disturbed by loud parties (23.8%), being insulted or humiliated (20.9%) and having a serious argument (15.6%).[29]

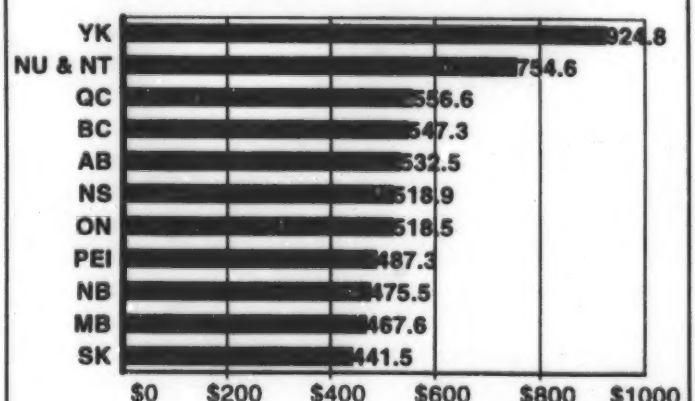
How much money do Canadians spend on alcohol?

The value of sales of alcoholic beverages per capita for people 15 years and over was $529.80 for 1999/00. That is up $20 from 1998/99, when the value of sales per capita was $509.00.[30]

How does the value of sales of alcoholic beverages per capita differ between the provinces?

In 1999/00, the value of sales of alcoholic beverages per capita ranged from a low of $441.50 in Saskatchewan to a high of $924.80 in the Yukon. See Figure 2 for information on the other provinces.[31]

Figure 2: Value of Sales of Alcoholic Beverages Per Capita (15 Years and Older) 1999-00



Source: Statistics Canada. *The Control and Sale of Alcoholic Beverages in Canada - Fiscal year ended March 31, 2000.* Catalogue no. 63-202 XIB. p. 10.

What do Canadians spend on the three different types of beverage alcohol?

In 1999/00, Canadians spent $3.36 billion on spirits, $2.93 billion on wines (including cider, sparkling beverages and coolers) and $6.72 billion on beer, for a grand total of $13 billion on alcoholic beverages.[32]

How much wine, beer and spirits do Canadians drink?

The per capita sales of alcoholic beverages by volume for people aged 15 years and older in 1999/00 was 6.3 litres of spirits, 11.7 litres of wines and 85.6 litres of beers.[33] For spirits and wine, this is an increase from 1995-96, when the per capita sales were 5.4 litres of spirits and 10.2 litres of wine. The per capita sales of beer is down slightly since 1995-96, when per capita was 86 litres.[34]

In Canada, what is the difference between "light beer" and plain "beer?"

The difference is in the percentage alcohol by volume. A beer bears the label "light" if its percentage alcohol by volume is 2.6 to 4% compared to 4.1 to 5.5% in "beer." The following chart shows the various names of beverages based on percentage alcohol by volume.[35]

% ALCOHOL BY VOLUME	COMMON NAME
1.1 to 2.5	Extra Light Beer, Extra Light Ale, Extra Light Stout, Extra Light Porter
2.6 to 4.0	Light Beer, Light Ale, Light Stout, Light Porter
4.1 to 5.5	Beer, Ale, Stout, Porter
5.6 to 8.5	Strong Beer, Strong Ale, Strong Stout, Strong Porter, Malt Liquor
8.6 or more	Extra Strong Beer, Extra Strong Ale, Extra Strong Stout, Extra Strong Porter, Strong Malt Liquor

Source: Brewers Association of Canada. *Legislation Digest.* August 20, 2001. p. 3.

Are there rules regarding broadcast advertising of alcoholic beverages?

In Canada, broadcasting regulations with regard to alcoholic beverages prohibit[36]:

- attempting to influence non-drinkers of any age to drink
- appealing to minors. For example, the ad cannot portray people under the drinking age or show youth symbols, such as children's toys or fairy tale characters.
- endorsement by a person, character or group who is a role model for minors. If a person is established as a role model for young people, he or she will be considered as such for a period of ten years from the date of retirement from the activity.
- suggesting that consumption is associated with social acceptance, personal success or athletic or business achievement
- attempting to establish the product as a status symbol, a necessity for the enjoyment of life or an escape from life's problems
- associating the product with an activity requiring a significant degree of skill, care or mental alertness
- showing scenes in which the product is being consumed

Do provincial & territorial governments also regulate alcohol products?

Yes. Provincial and territorial legislation governs several areas, including[37]:

- the control and sale of alcohol for off-premises consumption
- the sale of alcohol in on-premises establishments
- pricing
- the minimum drinking age
- the transport of alcohol
- the prohibition of public consumption
- the prohibition of the sale of alcohol to intoxicated persons

Therefore, there are minor differences between the provinces when it comes to the control of alcoholic beverages.

ALCOHOL IN MANITOBA

Do more men or women seek rehabilitation for a serious drinking problem in Manitoba?

The AFM's Annual Statistical Review Indicated that in 2000-01 almost three-quarters of the participants in AFM's Adult Rehabilitation Service were men. Of 3,330 total participants, 2,368 (71.1%) were men and 962 (28.9%) were women.[38]

What is the relationship between education and seeking rehabilitation for a drinking problem?

Over half (55.5%) of the clients in AFM's Adult Rehabilitation Service in 2000-01 reported that they did not finish high school. Almost one quarter (22.5%) completed high school. The rest (22.1%) report having some post secondary education, whether complete or incomplete. The percentage of those who reported having a complete undergraduate or graduate university degree was only 4.5%.[39]

What is the household income of people seeking rehabilitation for a drinking problem?

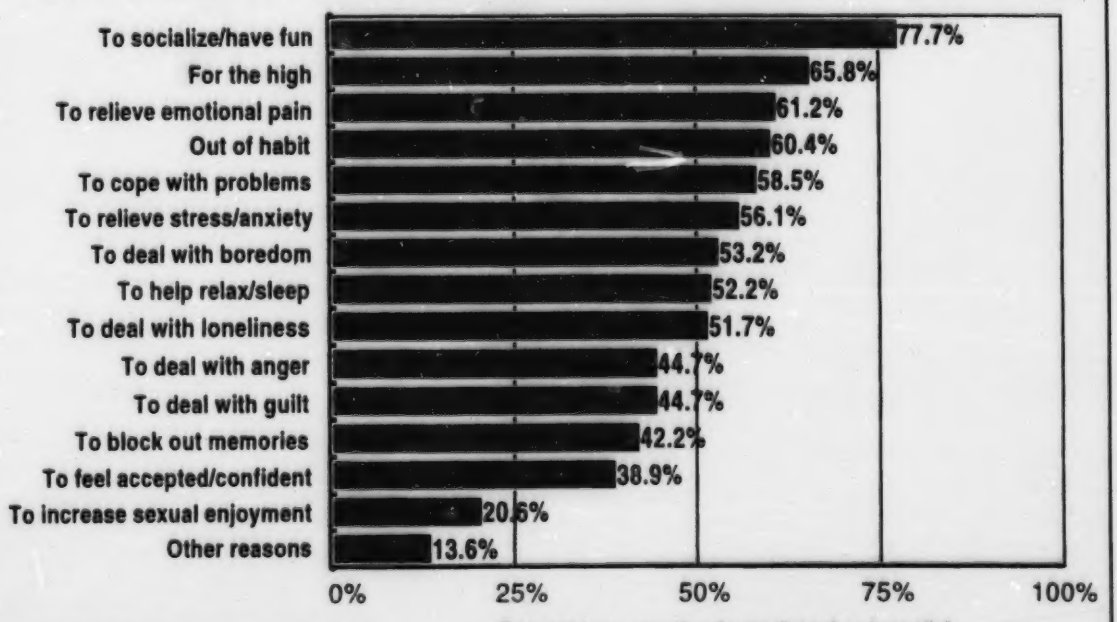
Addictions Foundation of Manitoba client data suggests that people with lower household incomes are more likely than those with higher household incomes to be involved in rehabilitation programs. Over two-thirds (65.7%) of AFM's Adult Rehabilitation Service clients in 2000-01 reported household incomes of less than $30,000, with 27.2% of these reporting incomes under $10,000. Of the remaining clients, 21.4% reported that their household income was between $30,000 and $49,000, 7.8% was between $50,000 and $75,000 and 5% was over $75,000.[40]

Why do AFM clients drink?

AFM clients reported a wide variety of reasons for drinking and using other drugs. The clients attending programs in 2000-01 reported that they "sometimes" or "usually" used alcohol or drugs for the following top five reasons[41]:

- to socialize or to have fun (77.7%)
- for the high (65.8%)
- to relieve emotional pain (61.2%)

Figure 3: Why AFM Adult Rehabilitation Clients Use Alcohol/Other Drugs



Source: Addictions Foundation of Manitoba. *Annual Statistical Review 2000-01.* pp. 98-99.

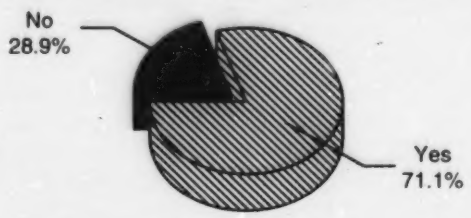
- out of habit (60.4%)
- to cope with problems (58.5%)

The percentage of AFM clients claiming these and other reasons for drinking or using other drugs are found in Figure 3 on the previous page.

What is the relationship between having a drinking problem and getting into trouble with the law?

According to Addictions Foundation of Manitoba client data, just over 70% of the clients involved in adult rehabilitation programs in 2000-01reported that they have been charged or convicted of a criminal offence at some point in their lives.[42] (See Figure 4 below.)

Figure 4: % of AFM Adult Rehabilitation Clients Ever Charged or Convicted of a Criminal Offence



Source: Addictions Foundation of Manitoba. *Annual Statistical Review 2000-01.* p. 85.

What is the role of the Manitoba Liquor Control Commission (MLCC)?

The MLCC is an agency of the Government of Manitoba under the Government Liquor Control Act. Its responsibilities include purchasing, selling and regulating alcoholic beverages, as well as licencing and regulating facilities in which alcohol is served.[43]

How much money is added to the Manitoba economy as a result of the sale & regulation of alcoholic beverages?

According to the 2000-01 annual report, the general and administrative expenses of the MLCC amounted to $36.6 million. That figure includes $23.5 million for salaries and benefits, $4.1 million paid out for leased and rented premises, $961,000 for maintenance and repairs, $1.1 million for delivery charges and $1 million for advertising, promotions and social responsibility programs.[43]

What were the sales and profits of the Manitoba Liquor Control Commission in 2000-01?

Revenues for the year ending March 31, 2001 were $400.8 million, which is $7.3 million more (1.8%) than the previous year.

The recipient of MLCC's net profit is the Province of Manitoba. In 2000-01, this amounted to $158.6 million, an increase of $2.3 million (1.5%) over the previous year.[43]

How many licenced liquor stores operate in Manitoba?

Manitoba has[43]:

- 303 licenced beer vendors
- 179 licenced liquor vendors and duty free stores
- 45 liquor stores (22 in Winnipeg and 23 in rural Manitoba)
- 8 specialty wine stores, all in Winnipeg (These stores are privately operated.)

What is the most frequently purchased alcoholic beverage in Manitoba?

Beer continues to be the most frequently purchased alcoholic beverage in the province by dollar sales and volume (litres) sold in 2001. Dollar sales of beer increased 3.4% and volume sales (litres) increased 1.3% over the previous year. Dollar and volume sales of spirits, wines and coolers/ciders remained constant or increased marginally.[43]

How much does each Manitoba household spend on alcohol each year?

Statistics Canada reports that during 1999, the average expenditure on alcoholic beverages per household in Manitoba was an estimated $689, compared to $597 on tobacco products and smokers' supplies, $5,718 on food and $2,950 on recreation. Alcoholic beverages accounted for approximately 1.4% of total average household expenditure for Manitobans.[44] Just over three-quarters of Manitoba households

(76.6%) reported spending money on alcoholic beverages.[45]

How much have sales increased in each of the beverage categories?

Since 1997, beer sales by volume (millions of litres sold) increased from 68.0 to 69.5, spirits increased from 6.3 to 6.4, wine increased from 5.5 to 6.3, and coolers/ciders increased from 1.2 to 2.0.[43]

What about home brewed wine and beer?

The levels of alcohol consumption reported by the MLCC do not include home brewed wine and beer. To provide a more complete estimate of total consumption in the province, the Addictions Foundation of Manitoba undertook a study in 1999 to determine the extent to which Manitobans are producing their own wine and beer.[46]

How much beer and wine is produced at home in Manitoba?

Based on the 1999 AFM study results, 14.4% of Manitobans produced their own beer and/or wine during the preceding 12 months. Of these, 11.2% produced wine only, 1% produced beer only and 2.2% produced both. It is estimated that 6.3 million bottles of wine (4.7 million litres) and 2.1 million bottles of beer (743,257 litres) were produced and/or consumed in 1998 in Manitoba households.[46]

When home production of wine is combined with retail purchases as reported by the MLCC in 1998, home production represented almost half (45.7%) of all wine produced and/or consumed in Manitoba, while home production of beer represented only 1.1% of all beer produced and/or consumed.[46]

How did the production of home brewed wine and beer affect volume of sales of wine and beer?

The volume of sales rose substantially. Using 1998 figures from the MLCC – the same year statistics were gathered for AFM's home production of wine and beer study – the total volume of sales including all types of alcohol increased by an estimated 5.4 million litres when home brewing statistics were taken into account (from the 82.5 million litres reported by MLCC to an estimated 87.9 million litres when the home brewing totals are included).

The volume of sales of wine was most greatly affected. MLCC reported the total volume of sales of wine to be 5.6 million litres. That total rose to an estimated 10.3 million litres when home production was included.

For beer, the MLCC reported a volume of sales of 69.0 million litres. After considering home brewed beer, that figure rose to an estimated.69.7 million litres.[46]

Who is most likely to produce wine and beer in their homes?

Manitobans most likely to produce their own beer or wine are those who: reside in Winnipeg; are either 18 to 24 years old or 40 to 64 years of age; have completed post-secondary education; and report annual household incomes of at least $50,000.

About 83% of the wine produced is consumed within the household, with the remaining 17% being given away to friends or relatives.[46]

How much home-made wine and beer are people allowed to keep in their residences?

People are allowed to have up to 227 litres of home-made beer and 227 litres of home-made wine in their residences.[47]

Can communities in Manitoba be "dry?"

Yes. According to provincial legislation, a municipality can be under "local option," meaning that a majority of eligible voters have voted against the local sale of liquor. Once this local by-law is passed, all liquor stores and licensed premises must cease operations, and no new ones can be established.[48]

Chapter 3

THE EFFECTS OF ALCOHOL ON THE INDIVIDUAL

What types of drinkers are there?

Most people who drink fall into the category of "social drinker." These are people who do not experience any trouble limiting their intake to amounts that produce no serious health or social consequences.

Those who misuse alcohol, however, can experience patterns of problem drinking that may result in health consequences, social problems, or both.

Some individuals become dependent on alcohol and suffer from a disease that has become known as "alcoholism." This disease is characterized by abnormal alcohol-seeking behaviour that leads to impaired control over drinking.

Alcoholics and alcohol misusers may experience many of the same harmful effects of drinking, but alcoholics are actually physically dependent on alcohol and exhibit an impaired ability to control intake.[1]

Is alcohol a stimulant or a depressant?

Alcohol is a depressant: high doses of alcohol produce motor impairment, sedation and sleep. However, shortly after a small amount of alcohol is taken, stimulatory effects, such as increased spontaneous motor activity, occur. These effects are similar to, but weaker than, those that occur after using amphetamines and other stimulant drugs.

Because alcohol can produce first stimulation and then depression, its actions are said to be "biphasic."[2]

How does alcohol work in the body?

Alcohol affects the central nervous system. It is immediately absorbed into the blood after it passes directly through the walls of the stomach and small intestine. The bloodstream then carries it to the liver and the brain. Thus, even the first few sips of alcohol can cause changes in mood and behaviour.

While in the body, alcohol is metabolized (meaning burned or broken down) by the liver at a fairly constant rate. When a person drinks faster than the alcohol is metabolized, it accumulates in the body and causes intoxication.[3]

How is the amount of alcohol in the body expressed?

The amount of alcohol in the body is expressed as the BAC, which means Blood Alcohol Concentration. BAC refers to the weight of alcohol (expressed in milligrams) in a standard volume of blood (usually 100 millilitres). So, a BAC of .08% means that the person has 80 milligrams of alcohol per 100 millilitres of blood. BAC can be expressed as .08 or .08% or 80 mg%.[4]

For more information on BAC and how it is measured, see page 41.

What factors will affect how quickly a person gets drunk?

There are several factors that affect how quickly a person gets drunk. They are:

BODY WEIGHT AND BODY TYPE

The extent to which alcohol affects an individual is partly dependent upon weight and body type. A person with a greater body weight (muscle, not body fat) will have a lower BAC than someone who has consumed the same amount of alcohol but has less body weight. That is because larger people have more body water and can disperse alcohol more effectively in their systems. As fatty tissue does not contain much water, people who do not have muscular body types will reach higher BACs than muscular people after drinking the same amount.[5]

TOLERANCE

Another factor is the person's tolerance to alcohol: individuals who have a long history of drinking develop tolerance to alcohol and require more of it to experience the effects of intoxication. Tolerance may be affected by anger, fear, stress, nausea and the condition of the stomach lining.

In his book, *Alcoholism: From Recognition to Recovery*, Addictions Foundation of Manitoba clinical psychologist Dr. Arthur Herscovitch states that tolerance can build so gradually in some people that they may not realize how significantly their alcohol intake has increased over time. For others, tolerance and, correspondingly, consumption may increase rapidly.[6]

Figure 5: Effects of Alcohol Consumption

BAC	General Physical Effects
.02 - .03	No observable effects. Slight euphoria and loss of shyness.
.04 - .06	Feeling of well-being, relaxation, lower inhibitions, sensation of warmth. Sociable, talkative. Euphoria. Some impairment of reasoning and memory, lowering of caution.
.07 - .09	Impairment of balance, speech, vision, attention span, reaction time and hearing.
.10 - .12	Significant impairment of motor coordination and loss of judgement.
.13 - .15	Gross motor impairment and lack of physical control. Blurred vision and major loss of balance. Euphoria is reduced and anxiety and restlessness begin.
.16 - .20	Drinker appears to be "sloshed." Staggering gait. Becomes more anxious and may be nauseated.
.21 - .25	Needs assistance walking, confused, restless, anxious. Likely to vomit, may be incontinent.
.26 - .30	Stupor. Most people will black out at some point after entering this stage.
.31 - .44	Entry into a coma. Risk of death due to respiratory arrest.
.45+	Death from respiratory arrest.

Source: Weinrath, Michael; Kaplan, Gerry. *A Summary of Research Findings on Alcohol's Effects on Driving, and the Relationship Between Fatal Crash Risk and Blood Alcohol Concentration.* Addictions Foundation of Manitoba. August, 1999. p. 23.

Dr. Herscovitch also notes that tolerance can increase to a certain point, then rapidly decrease. This usually occurs in people who are chronic (long term) alcoholics. For these individuals, small quantities of alcohol now produce intoxication.[7]

FOOD INTAKE

If there is food in a drinker's stomach, the absorption of alcohol through the small intestine will be slowed. As well, the elimination of alcohol is accelerated with the presence of food because its absorption is suppressed. For these reasons, food delays and reduces the effects of alcohol.

This suppression effect is greater when larger quantities of food are consumed close in time to the consumption of alcohol. Therefore, a glass of wine consumed during a big turkey dinner will slow down alcohol absorption more than a glass of wine consumed an hour before the meal. Eating, however, does not completely prevent the effects of alcohol. Food will slow down alcohol effects by 9% to 23%. [8]

MOOD AND ATTITUDE

Lastly, the drinker's moods and attitudes can affect his or her behavioural reactions to drinking.[9]

How does behaviour change as blood alcohol content (BAC) changes?

The first noticeable changes in mood and behaviour occur at about .04% to .05% BAC when the drinker becomes more relaxed and talkative. Changes continue as BAC rises, escalating from impairment of balance and reaction time at .07% to .09% BAC through to blacking out, entering into a coma and possibly dying from respiratory arrest at very high BACs. Figure 5 provides a detailed description of the effects of alcohol consumption on the individual at different BACs.[10]

Are there simple tests for evaluating someone's level of impairment?

It's difficult for people to assess their own levels of impairment. Some people may notice obvious symptoms, such as dizziness and slurred speech. However, alcohol can give drinkers a general feeling of well-being, so it's possible for people to underestimate how impaired they are.

Figure 6 on the next page describes three simple self-evaluation tests for alcohol impairment. They can be used as a guide, but under no circumstances should they be used to ascertain whether a person should or should not partake in activities such as driving. The only ways to gain an accurate reading of a person's blood alcohol content is through a breathalyzer test or a blood test. See page 41 for more information.

The AFM and many other organizations advise that no amount of alcohol be consumed before driving.

What is acute alcohol poisoning?

Consuming large amounts of alcohol in a short period of time, or binge drinking, can cause acute alcohol poisoning or overdose of alcohol. This can lead to violent periods of vomiting, coma and even death.[11] The term "alcohol poisoning" is also sometimes used to refer to long-term damages of alcohol to the liver, heart, pancreas and brain.[12]

Figure 6: Examples of Self-Evaluation Impairment Tests

Here are three self evaluation impairment tests that people can take just for fun.
Remember, these tests DO NOT CONSTITUTE A SCIENTIFIC MEASURE OF SOBRIETY.
Also, the AFM advises that no amount of alcohol should be consumed before driving.

ROMBERG'S TEST

Close your eyes and stand with your feet parallel and together, with your arms spread at your sides, level with your shoulders. Hold this position for 30 seconds.

- ❑ If there is a slight swaying of the body, centered in the shoulder region, you are slightly unstable.
- ❑ Swaying from the ankles indicates your performance is quite unstable.
- ❑ Having to take corrective steps to prevent falling is a sure sign of impairment of muscular control.

COLLECTING SMALL OBJECTS TEST

Throw four matches on the floor so they land fairly close together. Then, with one hand, try to pick them up all at once and place them on a table. If, after drinking, you can pick up all four on the first attempt and place them on a table, you're showing no signs of instability. However, if you fumble or drop matches, you are showing signs of being slightly inebriated.

COUNTING BACKWARDS TEST

Select any number over 90 and begin counting backwards by subtracting three numbers at a time. (For example 97, 94, 91, 88, etc.) If, after a few drinks, you make several errors, you're beginning to show signs of impairment.

Source: Transport Canada/Traffic Injury Research Foundation. *Smashed.* 1994.

Should a person be taken to the hospital if acute alcohol poisoning is suspected?

Drinkers who have passed out on alcohol should be rolled onto their sides to avoid choking in case of vomiting. An ambulance should be called immediately if the person has irregular breathing, an unconscious appearance and bluish skin tone.[13]

What effect does chronic alcohol abuse have on the liver?

The liver is the organ which processes alcohol in the body. If the liver is constantly required to detoxify alcohol, liver cells can be destroyed or altered.[14] One or more of the following conditions may result:

FATTY LIVER

This is a condition in which fat accumulates in the liver. It can be stopped and reversed by abstaining from alcohol.[15] While it is believed to be the first stage of alcoholic liver disease, fatty liver by itself does not lead to the development of the more serious alcoholic hepatitis or alcoholic cirrhosis.[16]

ALCOHOLIC HEPATITIS

This is an inflammation of the liver which lasts one to two weeks. Over a period of years it may lead to alcoholic cirrhosis. Symptoms include loss of appetite, nausea, vomiting, abdominal pain and tenderness, fever, jaundice and sometimes mental confusion.[17]

While alcoholics frequently suffer from alcoholic hepatitis, it can also occur in social drinkers, as people vary greatly in the way their livers react to alcohol.[18]

Alcoholic hepatitis can be fatal, especially if the person has had previous liver damage. If, after being detected through a biopsy, alcoholic hepatitis is treated early, the progression to cirrhosis of the liver can be stopped.[19]

CIRRHOSIS OF THE LIVER

While hepatitis is an inflammation of the liver, cirrhosis of the liver means normal liver cells have been damaged and replaced by scar tissue. This scarring keeps the liver from performing its vital functions.[20]

Genetic predisposition and co-factors, such as chronic infection with hepatitis C virus, may increase an alcoholic's risk of developing cirrhosis. Between 10% and 15% of alcoholics have cirrhosis at the time of death.[21]

In Canada in 1992, 960 people died as a result of alcoholic liver cirrhosis,[22] including 37 Manitobans.[23]

What other negative effects can chronic alcohol abuse have on a person's health?

Several systems of the body can be negatively affected by chronic alcohol abuse. These include:

THE CARDIOVASCULAR SYSTEM

The cardiovascular systems of chronic drinkers are often negatively affected by alcohol. These people may experience hypertension, weakened heart muscles and increased risk of hemorrhagic stroke and arrhythmia. (The latter is thought to account, in part, for the high incidence of sudden death in alcoholics.)

THE IMMUNE SYSTEM

Research also suggests that alcohol depresses the functioning of the immune system, placing chronic alcohol abusers at an increased risk for infectious diseases.

THE REPRODUCTIVE SYSTEM

Both male and female alcohol abusers may experience negative effects to their reproductive systems. In men, testosterone levels may be reduced, while the menstrual cycles of women may become disturbed.[24]

OTHER NEGATIVE EFFECTS

For alcohol abusers, there is an increased incidence of cancers, including cancer of the pharynx, larynx, mouth and esophagus. In women, there is more rapid development of certain disorders, such as fatty liver, anemia, malnutrition, gastrointestinal bleeding and

QUICK QUIZ
True or False?

Find out how much you know about how alcohol affects you. Answers on page 52.

T F 1. Mixed drinks, such as rum and cola or rye and ginger, are the most likely to make us tipsy. Wine is less intoxicating, and beer is the least likely to make us drunk.

T F 2. To reach a blood alcohol content of .08% (the legal limit for impaired driving), you have to consume at least three drinks in one hour.

T F 3. You've just had your only drink of the evening – a bottle of regular beer – and you drive home. Your ability to notice a car approaching from a side street will be slightly less than if you'd had nothing to drink.

T F 4. You can go to bed at 1 a.m., sleep off an evening of heavy drinking and be legally ready to drive to work at 8 a.m.

T F 5. You're helping a friend build a fence on a hot day. You've been working hard, drinking a few beers and sweating. You know you can drive home safely because the exertion and heat have burned off most of the alcohol.

T F 6. A drink every day or two can be good for you.

T F 7. Alcohol helps you sleep.

T F 8. Being sure to eat while you're drinking will keep you sober.

T F 9. You can die from drinking too much alcohol too quickly.

T F 10. Two drinks a day will help you live longer.

T F 11. If you have a drink to relax before a party, you'll be more sociable.

T F 12. Walking a straight line or closing your eyes and touching your nose with your index finger is a reliable test of your ability to drive after drinking.

T F 13. Alcohol will help you relax.

T F 14. Wine makes dinner more enjoyable and is a responsible way to drink.

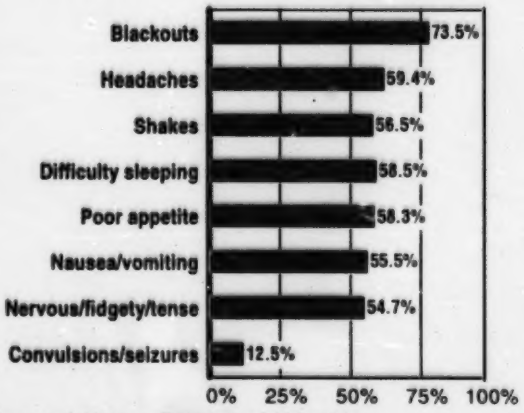
T F 15. Other people form opinions about us based on whether we drink and how we behave when we're drinking.

T F 16. Drinking can affect your decision making.

T F 17. There's no need to be concerned about drinking alcohol while taking over-the-counter non-prescription drugs.

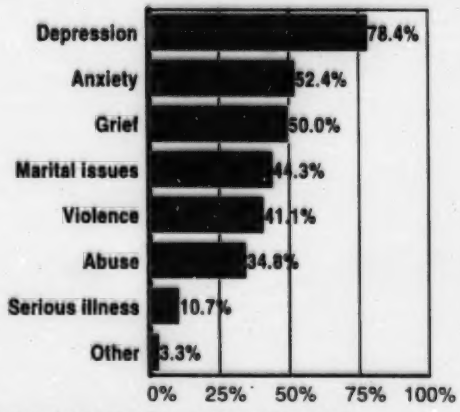
Source: *Alcohol and Lifelong Health*, produced by: AFM; Manitoba Liquor Control Commission; Association of Canadian Distillers.

Figure 7: Serious Physical Effects Reported by AFM Adult Clients



Source: Addictions Foundation of Manitoba. *Annual Statistical Review 2000-01.* p. 103.

Figure 8: Emotional Problems & Issues Experienced by AFM Adult Clients



Source: Addictions Foundation of Manitoba. *Annual Statistical Review 2000-01.* p. 104.

hypertension. The reason for this may be that the same amount of alcohol will result in higher blood alcohol concentrations for women than for men.[25]

How does alcohol affect attention and memory?

Alcohol impedes the capacity to absorb information from more than one source at the same time and to switch from one source of information to another. Higher levels of alcohol also adversely affect attention, measured in reaction time. Some tests measuring speed and accuracy suggest that alcohol affects accuracy and consistency more than speed.

Memory storage processes are particularly disrupted by alcohol – intoxicated drinkers have trouble processing new information and recalling it later.

With acute doses of alcohol, memory blackouts may occur without loss of consciousness.[26]

Alcohol-impaired drivers require more time to read a street sign or to recognize and respond to traffic signals than those who are sober.

What kinds of serious physical effects have AFM clients experienced?

In AFM's 2000-01 Annual Statistical Review, clients in the Adult Rehabilitation Program reported experiencing a variety of physical effects. A total of 73.5% said they had blacked out, 59.4% had experienced headaches, 56.5% had experienced shakes and 12.5% had suffered seizures.[27] Several other serious effects are revealed in Figure 7.

Are injuries common for those who drink to excess?

Accidental injuries are, unfortunately, a common side effect of excessive drinking. For example, in Manitoba in 1992, people who were injured in a fall while drunk spent a collective total of 15,894 days in the hospital recovering from their injuries. Sixteen Manitobans died as a result of injuries from accidental falls.[28]

What emotional problems and issues have AFM clients experienced?

The 2000-01 Annual Statistical Review revealed that AFM Adult Rehabilitation clients had experienced several emotional problems and issues, such as depression (78.4%), anxiety (52.4%) and grief (50%). Figure 8 reveals these and more reported by clients.[29]

Does alcohol affect women differently than men?

A woman who drinks the same amount of alcohol as a man of the same weight will have a blood alcohol level that is approximately 25% higher. This is because women have about 20% more body fat than men, and alcohol is not very fat soluble.[30]

Can an individual become physically dependent on alcohol?

Yes, as indicated by symptoms of withdrawal that result from the absence of alcohol in the body when drinking is discontinued.

Withdrawal symptoms usually fall into three stages: Mild (Stage 1), Moderate or Intermediate (Stage II) and Severe (Stage III), which is also known as delirium tremens.

The symptoms of Stage I, which are mild and occur from a few hours to three days after the last drink, include anxiety, insomnia, agitation, increased blood pressure and pulse, and perspiration.

In Stage II, the symptoms described above may escalate, and seizures (almost always grand mal) may occur, usually within 48 to 72 hours after the last drink. As well, alcoholic hallucinations and delusional thinking are symptoms that occur in Stage II.

Delirium tremens of Stage III develops three or four days after the last drink. The person experiences severe sympathetic nervous system hyperactivity and psychosis accompanied by severe hypertension, perspiration, agitation and often hostility and fear. As well, vivid hallucinations (visual, auditory or tactile) occur.[31]

How are withdrawal symptoms treated?

Individuals experiencing withdrawal symptoms should be treated under the care of a physician who can prescribe appropriate medication.The right medication can provide a smoother withdrawal course for the person and can help control symptoms of psychosis.[32]

Is alcohol psychologically addictive?

While physically dependent individuals may drink to alleviate the above-mentioned withdrawal symptoms, it is interesting to note that some people who have "kicked the habit" (that is, they have been abstinent for a time and no longer suffer from withdrawal symptoms) will voluntarily go back to their old drinking patterns. This suggests that recovering alcoholics start drinking again for psychological rather than physical reasons.[33]

Researchers are starting to look into the reinforcing properties of alcohol in an attempt to understand why some people crave it. For example, a person may learn that drinking alcohol will lead to a desired outcome (or reinforcer), such as a feeling of euphoria. Other researchers are investigating whether the euphoria stems from alcohol's effect on the brain, or whether it comes from the alleviation of an underlying anxiety.

Are there any positive effects of alcohol on the individual?

Some studies show that moderate drinkers may have a reduced risk of heart disease. In his studies, Dr. Curtis Ellison of the University of Boston School of Medicine concluded that alcohol, when consumed in moderation, appears to raise levels of "good" cholesterol (HDL) while lowering "bad" cholesterol (LDL), thus reducing the risk of myocardial infarction by about one-half.

This has become known as the "French Paradox." Even though people in France have a high fat diet, higher rates of smoking and lower levels of physical activity, they have lower rates of cardiovascular disease than any other industrialized western country. It is thought that this is due to their moderate drinking habits.[34]

The Costs of Substance Abuse in Canada study found that, while alcohol accounted for approximately 86,000 hospitalizations in Canada in 1992, it also prevented an estimated 7,401 deaths because low level alcohol use warded off health problems such as ischaemic heart disease and stroke, cholelithiasis and heart conditions.[35]

A related study, The Costs of Substance Abuse in Manitoba, estimated that alcohol prevented an estimated 338 deaths in the province in 1992, also due to the benefits of drinking mentioned above.[36]

Is there an amount of alcohol that is considered "safe" to drink?

Based on an in-depth literature review, the Addictions Foundation of Manitoba issued a position statement in 1997 on low-risk drinking. The study revealed that, if people stick to the recommended guidelines, they will minimize the health and social risks associated with alcohol consumption. The chart on the next page summarizes the low risk drinking guidelines.[37]

Low Risk Drinking Guidelines

GUIDELINE #1
Drink no more than two standard drinks on any day; limit weekly intake to 14 standard drinks for men and 9 standard drinks for women.

- Note: A standard drink is defined as one 12 ounce bottle of beer (5% alcohol); one 5 ounce glass of table wine (12% alcohol); one 1 1/2 ounce shot of liquor (40% alcohol); or one 3 ounce serving of fortified wine.

GUIDELINE #2
Drink slowly to avoid intoxication; wait at least one hour between drinks; take alcohol with food and non-alcoholic beverages.

GUIDELINE #3
If you abstain, do not start drinking alcohol for its protective benefits against heart disease; there are less risky alternatives (quitting smoking, exercise, better nutrition.)

GUIDELINE #4
If you are seeking help for a drinking problem, follow the guidelines and advice of your counsellor.

GUIDELINE #5
People who should not use alcohol or who should limit their use to less than the guidelines include:

- People with certain health problems, such as substance dependence, uncontrollable high blood pressure, liver disease or psychiatric illness.
- People taking certain medications, such as sedatives and pain killers.
- People with a personal or family history of serious drinking problems.
- Women who are pregnant, trying to conceive or breast-feeding.

- People who are operating vehicles, such as automobiles, motorcycles, boats, snowmobiles or bicycles.
- People who need to be alert (i.e. while working on machinery, while engaging in challenging physical activities or when responsible for the safety of others or public order.)
- People who are under any legal or other restriction on drinking, personally or because of their environment.

Source: Addictions Foundation of Manitoba.

Chapter 4
ALCOHOL & YOUTH

Is alcohol use among Manitoba students on the rise?

Results from a 2001 AFM High School Survey of 4,680 rural and urban students from across the province indicate that alcohol use has increased since 1997. In 2001, 87.4% of students reported using alcohol at some point in their life, compared with 83.9% in the 1997 survey results.[1]

The percentage of high school students who had drank alcohol in the past year also rose to 80.4% in 2001, an increase of about 2% over survey results from 1997. This rate is identical to the one estimated for Manitoba adults overall.[2]

Alcohol use has remained relatively constant since 1995, although there has been an increase in the percentage of female students who drink more than once a week (7.1% in 2001, compared with 5.6% in 1997).[3]

Is alcohol a drug of choice for Manitoba high school students?

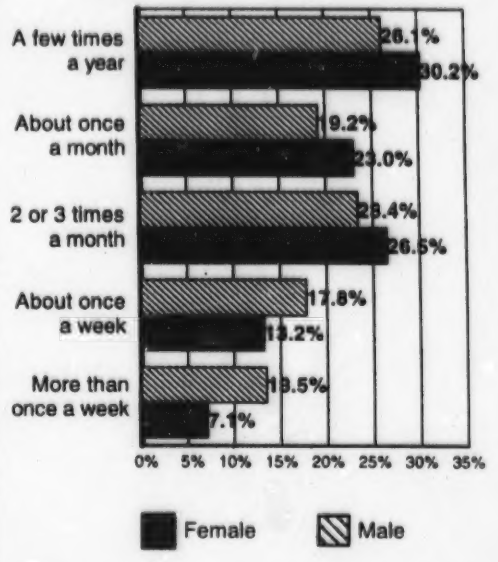
Yes. Alcohol was the drug most used by Manitoba high school students during 2001. As mentioned previously, just over 80% reported using alcohol in the past year, compared to the the second and third most-used drugs – tobacco and marijuana – which were used by 39.5% and 37.9% of students respectively.

Other drugs used by a smaller percentage of students in the past year include, in descending order: psilocybin, (15.1%), powder cocaine (4.5%), ecstasy (4.3%), LSD (3.8%), stimulants (3.5%), crack cocaine (3.3%), methamphetamine (2.7%), inhalants, (2.3%) and other club drugs (1.5%).[4]

How often do Manitoba students drink?

Among students who drank in the past year, 26.5% of females and 23.4% of males reported using alcohol 2 or 3 times a month, while 13.2% of females and 17.8% of males reported drinking about once a week and 7.1% of females and 13.5% of males drank more than once a week. At the lower end of frequency of use, 30.2% of females and 26.1% reported drinking a few times a year.[5] (See Figure 9.)

Figure 9: Frequency of Alcohol Use by High School Students in Past Year (by Gender)



Source: *Substance Use Among Manitoba High School Students.* Addictions Foundation of Manitoba. 2001.

How does frequency of drinking compare by grade?

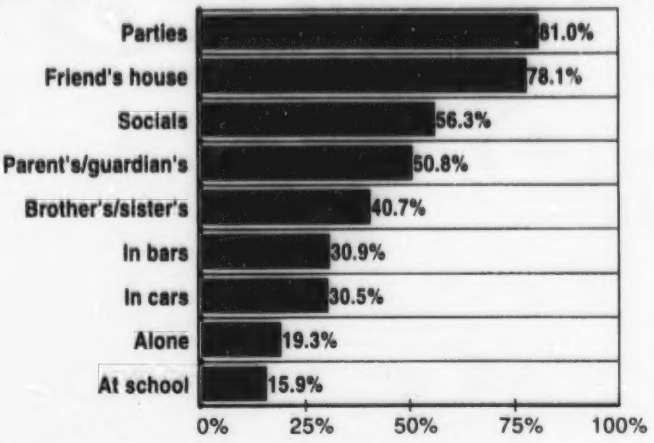
Not unexpectedly, the frequency of drinking increases continually with each grade. For example, 33% of Senior 4 students who drank in the past year report drinking once a week or more, compared with 17% of Senior 1 students, 22% of Senior 2 students and 30% of students in Senior 3.

As another example, 96.3% of Senior 4 students drank at some point in the past year, whereas 87.8% of the Senior 1 students drank alcohol in the same time frame.[6]

Where are students drinking?

The most common location for students' drinking was at parties (81%) and at a friend's house (78.1%), as reported by those surveyed who drank in the past year. Socials were also popular with 56.3% drinking there, while 50.8% reported drinking at their parent's or guardian's house. These locations were equally popular

Figure 10: Location of Alcohol Use for Manitoba High School Students Who Drank in the Past Year



Source: *Substance Use Among Manitoba High School Students.* Addictions Foundation of Manitoba, 2001.

with male and female students who drank in the past year. For all of the other locations listed in Figure 10, males were more likely to report drinking in these places than females, including at a sibling's house, in cars, bars, at school or alone.

It is disturbing to note that over 30% of male students drink in cars, assuming that the driver may also be involved in this activity. Also of concern is the fact that almost 20% of students who drank in the past year reported drinking alone.[7]

How old are students when they start drinking?

Students begin drinking at an early age. The average age of first use of alcohol, whether male or female, is 13.3 years of age. The average age at which students begin drinking has remained constant since 1997 when it was 13.5 years.[8]

Do students perceive alcohol use as a major problem in their schools?

When asked about the three biggest problems facing students in their school, alcohol and drug use was listed second (58.6%) next only to failing at school (59.1%). In all of the previous AFM surveys, both of these items are identified by over twice as many students as any other item.

Some of the other problems reported by students include teacher or parent pressure (26.6%), conflicts with family (21.9%), bullying (19.5%), unwanted pregnancy (17.8%) and too much pressure by friends (15.4%).[9]

How many students report problems with use of alcohol?

About 6% of students report having had moderate or serious problems themselves with the use of alcohol. Students also reported experiencing problems as a result of family members using substances. About 15% of students have experienced moderate or serious problems as a result of family members using alcohol.[10]

How have attitudes towards alcohol use changed?

Attitudes towards alcohol and drug use were found to be more liberal in the 2001 survey compared with the 1997 results. Students reported in 2001 that religion has less of an influence on decisions about alcohol and drugs than in 1997, while parents are reported to have a greater influence than in the survey five years ago. There is also overall increased acceptance of both alcohol and drug use by both males and females as long as one is "in control of the use."

In general, males are more likely to agree with statements that reflect more positive attitudes towards alcohol or drug use. For example, males were much more likely than females to think that using drugs, including alcohol, is acceptable, as long as one is in control of the use. Also, male attitudes were much more likely to be influenced by peers than female attitudes, although there is a reduced influence of friends in the more current survey.[11]

How well do adolescents understand the effects of alcohol?

As noted by Jean Kinney, author of *Loosening the Grip*, adolescents tend to be uninformed about the effects of alcohol as a

drug in spite of its widespread use by teens. Instead, they rely on myths, such as the idea that beer, the most popular beverage, is less intoxicating than distilled spirits. One study showed that 42% of respondents thought five to seven cans of beer could be drunk in two hours without risk of intoxication. Seventy percent believed cold showers could sober up someone, and 62% thought coffee would do it. Kinney also notes that adolescents tend to minimize the consequences of drinking.[12]

Do Manitoba high school students consider alcohol use risky?

Results from the 2001 AFM High School Survey revealed that most students do recognize that some risk is involved in the consumption of alcohol. For example, 63.8% said that some risk or high risk was involved. On the other hand, 27.6% said that drinking alcohol was a low risk activity, while 8.5% reported that they thought there were no risks involved.

What are some of the reasons adolescents use alcohol?

Kinney lists a number of normal developmental reasons for adolescent alcohol use, including the fact that drinking, for many, can serve as a rite of passage towards adult activity, as well as way to fit in with the crowd. Alcohol can be used to avoid intimacy or to seek intimacy without responsibility. Alcohol use may form part of the "try it on" theme that runs throughout adolescence: youth may experiment with it as part of the task of developing a sense of identity or to take risks, which can lead to dangerous consequences. Also, one aspect of attaining independence is learning to set limits and develop self-control, which can be more difficult for some adolescents than others.[13]

What are the rates of alcohol use for college students in Canada?

Results from the first national Canadian Campus Survey (CCS), conducted by researchers from the Centre for Addiction and Mental Health and the University of Montreal in the fall of 1998, represents responses from 7,800 university undergraduate students in 16 universities across Canada. In this survey, 92% of students had consumed alcohol at some point in their lives, 87% drank in the past year and 85% drank during the 8 to 12 weeks since September, while they had been on campus.

A higher percentage of students living without family, whether it be on or off campus, reported alcohol consumption in the past year (about 90%), compared with students living with their family (83%).[14]

How often do college students drink?

On average, 62.7% of students reported consuming five or more drinks on a single occasion and 34.8% reported consuming eight or more drinks on a single occasion since the start of the school year (September).[15] Male students reported drinking more often than women (1.3 versus 0.8 times per week) and had a higher weekly alcohol intake (7.6 versus 3.9 drinks per week). Men were also significantly more likely than women to report heavy drinking as measured by five or more (60.6% versus 56.1%) and eight or more drinks (46.5% versus 25.2%) on a single occasion at least once since September.[16]

What reasons did college students cite for drinking heavily?

Students reported the highest consumption when the reason for drinking was to get drunk (8.9 drinks) followed by to celebrate or at a party (5.7 drinks each), to forget their worries (5.5 drinks) and to feel good (5.4 drinks).[17]

What were some of the consequences of drinking for college students?

The most frequent drinking consequences reported were having a hangover (37.6%), regretting their actions (12.6%), memory loss (11.2%), missing classes due to a hangover (10.5%) and missing classes due to drinking (7.3%).

Of the hazardous drinking measures, students were most likely to report having unplanned sexual relations (6.5%), driving a car after drinking too much (4.9%), drinking while driving (3.3%) and having unsafe sex (2.7%). Male students were significantly more likely than women to report experiencing both of the drinking and driving consequences.[18]

Is binge drinking a particular issue with college students?

The Center for Substance Abuse Research at the University of Maryland analyzed data from the Harvard School of Public Health College Alcohol Study. It found that frequent binge drinkers make up only 19% of the U.S. college population, yet account for 68% of alcohol consumed by college students and nearly half of the students who experienced at least one drinking-related problem, such as driving after drinking. In comparison, non-binge drinkers represent 57% of the U.S. college population, yet consumed only 9% of the alcohol.[19]

YOUTH IN REHABILITATION

The Addictions Foundation of Manitoba's Annual Statistical Review presents a chapter on youth who participate in the Foundation's Youth Services programs. The following section discusses some of the characteristics of these clients, who are age 12 to 18 inclusive and are involved in rehabilitation for alcohol, other drug use or gambling, or are affected by someone else's alcohol, other drug use or gambling involvement.

What percentage of AFM youth clients are male and female?

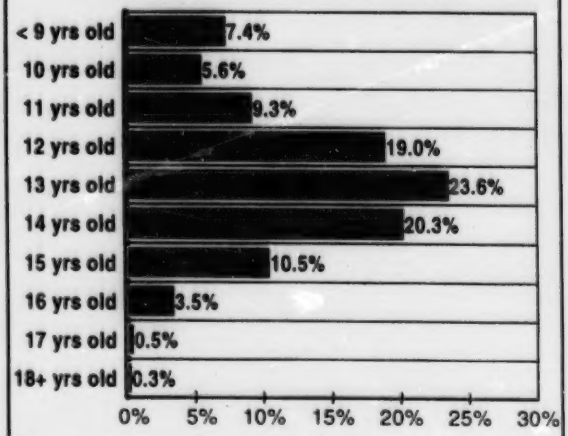
During 2000-2001, more males than females were involved in rehabilitation programs offered by AFM's Youth Services. Specifically, 64.9% were male and 35.1% were female. At approximately two-thirds male and one-third female, this ration has remain constant over the past five years.[20]

How old were AFM youth clients when they first used alcohol?

Almost three-quarters of AFM youth clients started using alcohol when they were between 12 and 15 years of age (73.4%). A few started at age 11 (9.3%), age 10 (5.6%) and age 9 or less (7.4%). Those who started drinking at age 16 to 18 (or over) amounted to 4.3% of the young people involved in AFM youth programs.[21]

Figure 11 provides more detail about the age at which AFM youth clients first used alcohol.

Figure 11: Age When AFM Youth Clients First Used Alcohol



Source: Addictions Foundation of Manitoba. *Annual Statistical Review 2000-01.* p. 254.

Is alcohol the drug of choice for AFM youth clients?

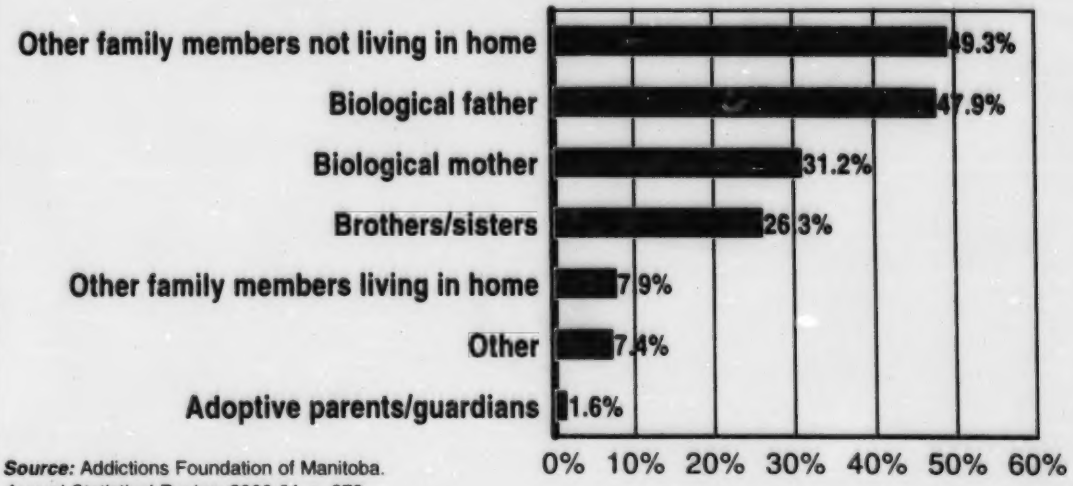
In a list of 14 different drugs, alcohol came in second in popularity, with the first drug of choice being marijuana. Alcohol was the most frequently used drug for 37.7% of youth clients, while 59.2% said they preferred marijuana over any other drug.[22]

The preference for alcohol has not changed much since 1996-97, when 40.9% of youth clients claimed alcohol as their first drug of choice. However, the preference for marijuana has increased from 52.6% in 1996-97.[23]

Do AFM youth clients have family members with alcohol or drug problems?

Over two-thirds (66.4%) of the youth clients involved in programs during 2000-2001 reported having family members who have experienced a problem with alcohol and/or other drugs. Of these, almost half (47.9%) said that the person with the problem was their father and 31.2% said it was their mother. In 26.3% of cases, a brother or sister was misusing alcohol or other drugs.[24] See Figure 12 (next page) for more information.

Figure 12: Percentage of AFM Youth Clients with Family Members with Alcohol/Drug Problems



Source: Addictions Foundation of Manitoba. *Annual Statistical Review 2000-01.* p. 279.

How aware and tolerant are parents or guardians of the drinking behaviour of AFM youth clients?

Just over 91% of AFM youth clients report that their parents or guardians are aware that they drink alcohol or use other drugs, and 48.3% report that parents or guardians are aware of the extent of their use.

Just under one-quarter (23.7%) of the youth also report that parents or guardians approve of their alcohol use, and 46.3% of youth clients claim to have consumed alcohol while with their parents or guardians.[25] See Figure 13.

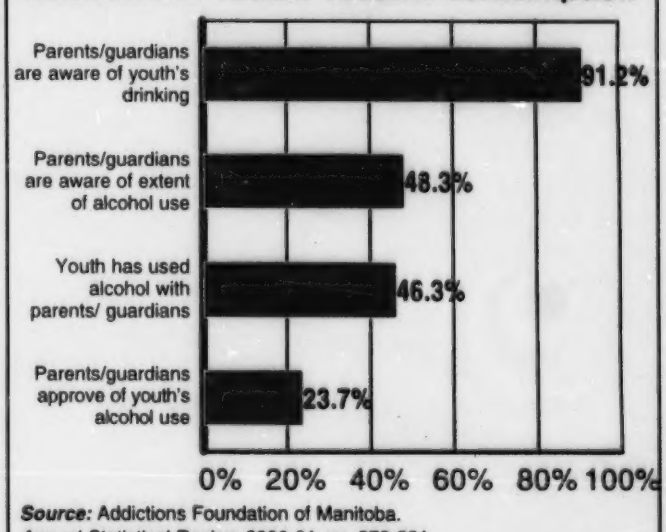
How often do AFM youth clients use alcohol?

"Mainly weekends/days off" and "a few days a month" were the most commonly reported usual use patterns for youth clients at 28.9% and 31.8% respectively. Almost 11% said they consumed alcohol to "experiment only." Only 3% claimed to be daily users, while, 6.4% reported drinking a few days a week.[26]

To what extent do AFM youth clients binge drink?

AFM youth clients were asked how often they engaged in binge drinking (more than five drinks per sitting) during the past month. While half of the clients said this had not happened in the past month, one-third claimed it happened 1 to 3 times. One-tenth reported drinking this much 4 to 6 times in the past month.

Figure 13: Parent/Guardian Awareness & Tolerance of Youths' Alcohol Consumption

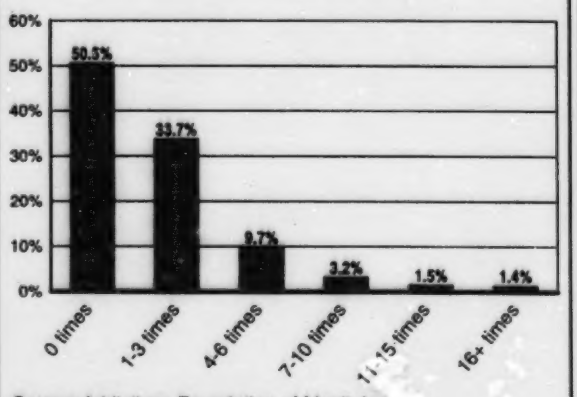

Parents/guardians are aware of youth's drinking
91.2%
Parents/guardians are aware of extent of alcohol use
48.3%
Youth has used alcohol with parents/ guardians
46.3%
Parents/guardians approve of youth's alcohol use
23.7%
0% 20% 40% 60% 80% 100%

Source: Addictions Foundation of Manitoba. *Annual Statistical Review 2000-01.* pp. 279-281.

Approximately 5% had consumed five or more drinks during one sitting 7 to 15 times in the past month. A small percentage (1.4%) did so 16 or more times.[27] See Figure 14.

When asked if they'd ever experienced blackouts, 56.6% of the youth clients said "yes." Data analysis completed by AFM's Research Unit found that youth who binge drink are more likely to experience blackouts than those who don't.[28]

Figure 14: % of Youth Clients Drinking 5 or More Drinks in a Sitting (During Past Month)



Source: Addictions Foundation of Manitoba. *Annual Statistical Review 2000-01.* p. 267

Is binge drinking more dangerous than frequent drinking?

According to Laura Goossen, Supervisor of Youth Community Based Services at AFM, binge drinking has more potential consequences affecting immediate safety, such as blackouts, alcohol poisoning and unprotected and/or unintended sex. On the other hand, frequent drinking, especially if it is heavy, can cause damaging long term consequences, such as relationship problems, difficulties maintaining school and work activities and increased likelihood of engaging in other risky behaviour, such as drinking and driving.

If the youth who are frequent drinkers (i.e. daily drinkers or drinking a few times a week), are also binge drinkers, then more problems will occur for those individuals. "These are the youth we are trying to reach in our programs," says Goossen. "The combination of heavy and frequent drinking significantly contributes to the likelihood that the youth and their families will experience a multitude of problems."[29]

Do any AFM youth clients also have mental health concerns?

At the time that they first sought help from AFM, 15% of the youth clients reported that they were currently experiencing depression and 7% were currently experiencing anxiety.[30]

Another piece of data that may indicate that some clients are having difficulty with mental health concerns is this: 16.4% of youth clients reported that they often or almost always used alcohol or other drugs to relieve stress or to help them sleep. These clients are not necessarily the same clients who reported experiencing depression or anxiety, but stress and sleeplessness are often symptoms of anxiety or depression.[31]

Feeling that life is not worth living and suicide ideation or attempts are other indicators that a person may have mental health concerns. AFM data reveals that these indictors are present in many of its youth clients. For example, 40.1% of youth clients have, at some point in their lives, felt that life is not worth living. One-third of these clients (32.5%) have at one time or another thought about suicide, and almost half (46.4%) have actually tried it. Of those who attempted suicide, it is interesting to note that most of them (68.8%) said they were NOT under the influence of alcohol or drugs at the time of the attempt: they were making the suicide attempt with a clear mind.[32]

Chapter 5
ALCOHOL & SENIORS

Why does the health care community need to pay attention to seniors?

Issues facing seniors are receiving increasing attention for two critical reasons. First, people are living longer and second, the baby boomer population bulge is moving into its senior years. According to Statistics Canada (1998), 12% of all Canadians are aged 65 and over, compared with 5% in 1921. Compared to other provinces, Manitoba has the second highest proportion (13.6%) of this age group, next only to Saskatchewan (14.6%).[1]

The Manitoba Bureau of Statistics (1999) has projected a dramatic increase in the senior population as baby boomers age. Between 2001 and 2011, the 55 to 64 age group is projected to increase by 44.5%. Between 2011 and 2021, the 65 to 74 age group is projected to increase by 35.0%.[2]

PROJECTED INCREASE IN MANITOBA POPULATION BY AGE

	2001	2011	2021	2031*
55 to 64	102,300	147,800	163,000	137,000
65 to 74	79,000	89,200	120,400	141,100

**By this time, the average age of baby boomers will be 70.*

How many seniors drink?

Generally, alcohol consumption decreases with age. However, today's seniors may actually drink more than previous generations. Some reasons for this may be increased social acceptance of drinking and more disposable income in retirement.[3]

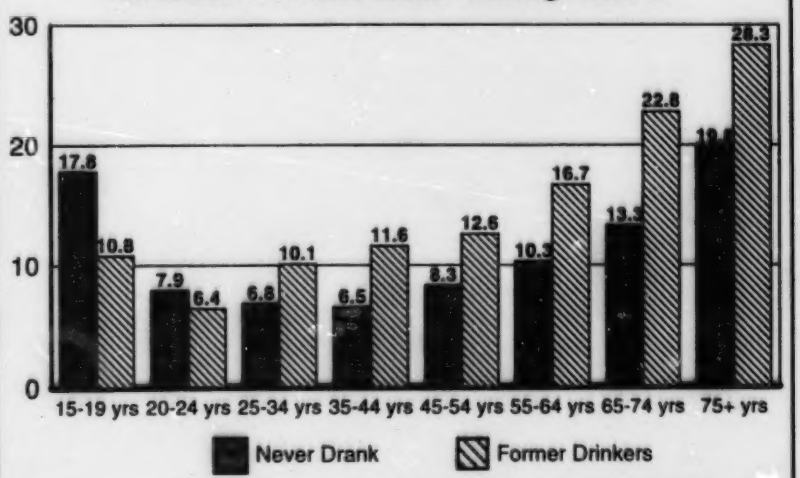
According to the 1998-99 Statistics Canada figures, 62% of women and 72% of men aged 65 to 74, and 61% of men and 45% of women aged 75 and over, are current drinkers. This represents an increase over 1985 figures.[4]

How many Canadian seniors do not drink at all?

The 1996-97 National Population Health Survey (NPHS) reported that 9.7% of Canadians age 15 and older had never drank alcohol. Of those in the survey age 55 to 64, 10.3% had never drank, nor had 13.3% in the 65 to 74 age group and 19.8% in the 75+ age group.

Of Canadians age 15 and over, 13.5% reported that they were former drinkers. Of those age 55 to 64, 16.7% claimed to be former drinkers, as did 22.8% in the 65 to 75 age category. Almost 30% of those respondents age 75+ claimed to be former drinkers.[5] (See Figure 15.)

Figure 15: Type of Drinker by Age Among Canadians 15 and Older During 1996-97



Source: Canadian Profile: Alcohol, Tobacco and Other Drugs 1999. Centre for Addiction and Mental Health, Addiction Research Foundation and Canadian Centre on Substance Abuse. p. 41.

How many seniors consume more than seven drinks per week?

In the 1998-99 Statistics Canada figures, 27% of men and 21% of women aged 65-74 reported drinking between seven and 13 drinks per week, and another 17% of the men in this age group reported drinking on average more than 14 drinks per week.[6]

A national study published in 1995 found that 22% of seniors reported drinking four or more drinks per week, compared to 11% for the general population.[7]

What is the incidence of alcohol dependency in Canadian seniors?

The 1996-97 National Population Health Survey (NPHS) reported alcohol dependence in 0.5% of people age 55 to 64, 0.2% of people age 65 to 74 and 0.1% of seniors aged 75 and older. Compared to younger age groups, the incidence of alcoholism in seniors is low. For example, the NPHS reported that 5.1% of those respondents in the 15 to 19 age group and 6.8% in the 20 to 24 age group were dependent on alcohol.[8]

Prevalence studies in institutions have yielded higher rates of alcohol abuse among seniors than community-based studies. For example, 17% of all people over age 65 that presented in the emergency department of a major hospital in Winnipeg were screened as possibly being dependent on alcohol. In a study of residents in nursing homes, 2.8 to 18% of residents were found to have an active alcohol dependency.[9]

Another study of primary care settings found that 10 to 15% of elderly patients and up to 25% of hospitalized elderly were considered to be alcohol abusers or dependent on alcohol.[10]

Do seniors living in retirement communities drink more?

Contrary to the popular belief that social isolation is connected with higher alcohol use, a new issue is arising in the burgeoning retirement communities. In a study by the National Institute on Aging in the United States, the heaviest drinkers in this setting were defined as those who drink at least two or more drinks per day and represented 20% of those studied. Notably, they also turned out to be socially more active, which raises the question of whether social activity in retirement communities may enable or even promote heavier drinking by some individuals.[11]

Do alcoholic seniors have a history of excessive alcohol consumption?

Most alcoholic seniors have a long history of problems with alcohol abuse and are described as "early onset."[12] However, approximately one-third develop alcoholism at an older age and are described as "late onset".[13] There may be a number of reasons for seniors turning to alcohol at a late age, as listed below.

Are the reasons that seniors drink alcohol different from younger people?

Yes. As people age, they face substantial changes in their lives. In varying degrees, these changes can include environmental, social, physiological and health changes. Loss, which is not a common theme for youth, can be an over-riding element of this change for some seniors:[14]

- loss of loved ones (spouse, relatives, friends)
- loss of the self-identity and income that accompanied paid work
- loss of health resulting in increased illness and possibly chronic pain
- loss of self-esteem and personal dignity in a society that reveres "youth"
- geographical separation of family members
- loss of privacy with both spouses at home all the time
- loss of body functions and skills
- loss of sensation as the senses become less acute with aging
- loss of thinking ability – perhaps the most traumatic loss

Sometimes seniors turn to alcohol as a form of self-medication for chronic pain or to help them sleep. Ironically, alcohol may help a person initially fall asleep, but can cause wakefulness later in the night.[15]

Suicide among the elderly is a major issue. In the US, the rate of suicide for those over 65 is five times that of the general population and after age 75, the rate is eight times higher.[16]

Depressive disorders are also more common among the elderly than among younger people and tend to co-occur with alcohol misuse.[17] Among persons older than 65, moderate and heavy drinkers are 16 times more likely than non-drinkers to die of suicide, which is commonly associated with depressive disorders.[18]

How do the effects of alcohol change as one ages?

Although seniors generally drink less than younger adults, they are more sensitive to its effects.[19] A variety of changes associated with

aging make seniors more vulnerable to the effects of alcohol. For example, declining body water content (less water for the alcohol to be diluted in) and increased body fat content in seniors means a higher blood alcohol level.[20] If a senior drinks the same amount of alcohol as a young adult, the senior will have at least a 20% higher blood alcohol concentration.[21] As a result, seniors may find that it takes less alcohol to get the same effect than when they were younger.

Diminished blood flow through the liver means alcohol is cleared more slowly from the body even though the rate of metabolism is unchanged. Other changes that make the elderly more vulnerable are reductions in lung capacity, kidney functioning and heart functioning. Also, seniors with existing cognitive impairments have a greater sensitivity to alcohol.[22]

Aging also interferes with the body's ability to adapt to the presence of alcohol (i.e. develop tolerance). Decreased ability to develop tolerance means an elderly person will exhibit effects of alcohol, such as coordination problems, at lower consumption levels. Some seniors may start experiencing problems related to alcohol even though their drinking habits are the same.[23]

What about mixing prescription medications with alcohol?

Seniors generally take more prescription or over-the-counter medications than other adults.[24] With more drugs being used, including alcohol, there is a greater potential for adverse interactions. Diagnosis of adverse drug reactions may be hampered because of their resemblance to symptoms caused by cognitive impairment or circulation problems.[25]

Alcohol interacts in a negative way with over 150 medications. For example, the use of alcohol with a mood-altering prescription is cause for concern, especially if the senior is depressed.[26]

Why is the issue of seniors and alcohol important?

Seniors may not realize that drinking can negatively affect activities of daily living and mobility, which are critical factors in retaining independence.[27] Drinking leads to falls: for example, the incidence of hip fractures in the elderly increases with alcohol consumption.[28]

Also, research suggests that the brains of older people may be more vulnerable to alcohol's degenerative effects than the brains of younger people. Chronic alcohol abuse appears to accelerate a person's cognitive decline by about 10 years.[29]

General reasons to look at alcohol consumption by seniors are quality of life, health and vulnerability to abuse, as heavy alcohol use can create an opportunity for someone to financially abuse a senior or frustrate caregivers, leading to physical or psychosocial abuse. Also, seniors who are addicted may be perpetrators of abuse, particularly with their spouses.[30]

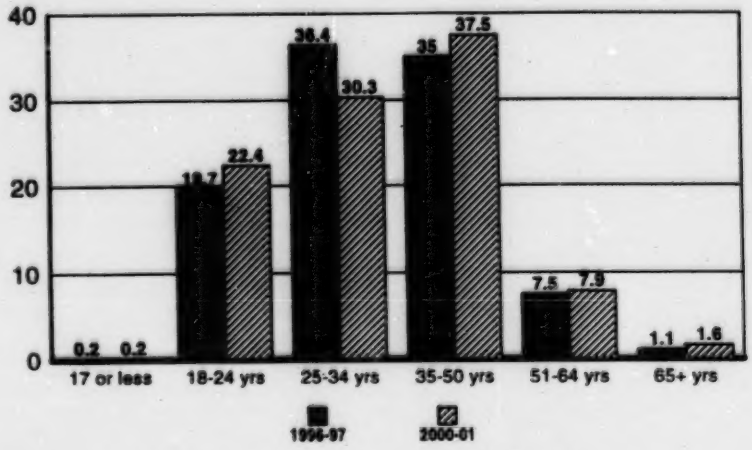
Seniors can benefit from different types of intervention, such as information and education, counselling, detoxification and support groups.[31]

Has AFM's Adult Rehabilitation Service seen an increase in older clients?

AFM's Adult Rehabilitation Service attracts some older people seeking treatment for an alcohol or drug problem, but there are far fewer clients over age 50 than under. In 2000/2001, 9.5% of clients were age 51 and over, while 90.2% were age 50 or less.

There has been a general increase in the number of older clients accessing services in the past five years, but this increase has been nominal. For example, the oldest age group tracked (65 and over) represented only 1.6% of all Adult Rehabilitation Service clients. This was an increase of 0.5% over 1996-97 data. The 51 to 64 age group represented 7.9% of all Adult Rehabilitation Service clients in 2000-01, an increase of 0.4% from 1996-97.[32] (See Figure 16 on the next page.)

Figure 16: AFM Adult Rehabilitation Service Clients by Age (1996-97 & 2000-01)



Source: Addictions Foundation of Manitoba. *Annual Statistical Review 2000-01*. p. 118.

What are some of the barriers to rehabilitation for seniors?

Based on an AFM Key Informant Survey (2000), some of the barriers to rehabilitation for seniors included: access, transportation, denial, feelings of embarrassment and shame, the stigma of going to an addictions agency and a lack of knowledge of the services available. Also, physical limitations, such as deafness or joint pain, can impede an older person's ability to access a building or attend an hour-long counselling session.[33]

Roberta Coulter, AFM's Regional Administrator, Winnipeg Region, points out that the barriers to rehabilitation mentioned above discourage an older person from initiating the helping process themselves – older people seldom ask for help. Such individuals are more often identified through other health or social services.

"The best way to reach seniors with alcohol problems is through community-based rehabilitation focused on health and the activities of daily living," says Coulter. "It's a more effective method than the traditional rehabilitation programs, as the pace and content of these programs may not be appropriate for older clients."

Why do family and professionals sometimes hesitate to intervene?

Family members, friends and even some professionals may hesitate to address a senior's alcohol consumption. They may feel they are taking away the only pleasure left to the senior or that the loss of this coping mechanism would be too harsh on top of all the other losses the senior has experienced. There is also the factor of "ageism" in which people question treating seniors because they are in their final years. Some professionals may feel this population is too difficult to work with or their overall needs are too overwhelming and confusing.[34]

ALCOHOL & THE FAMILY

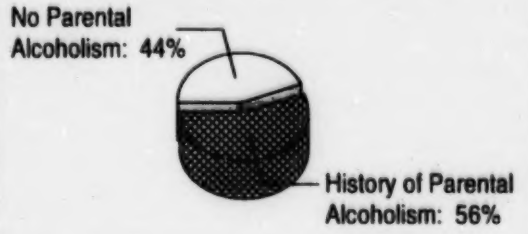
Does alcoholism run in families?

Many studies done in the field of alcoholism indicate that the disease does run in certain families. As shown in Figure 17, a Manitoba study on the differences among AFM clients with respect to history of parental alcoholism reveals that almost 56% of the 451 study participants (all of whom were clients in AFM's in- or out-patient rehabilitation programs) had grown up in an alcoholic home.[1]

Studies in the United States reveal that as many as 80% of clients receiving treatment in inpatient facilities have relatives who also have experienced the disease.[2]

According to Jean Kinney, author of *Loosening the Grip*, children of alcoholics are considered at risk for development of the disease in an approximate 4:1 ratio to those without an alcoholic parent.[3]

Figure 17: History of Parental Alcoholism in AFM Clients



Source: Addictions Foundation of Manitoba and the University of Manitoba: Study completed by Carole M. Beaudoin.

What differences exist between problem drinkers from alcoholic families and those from families with no alcoholism?

The study of 451 male and female in-patient and out-patient rehabilitation program participants at the AFM looked at this issue. Approximately half of the study's participants have family histories of alcoholism and half do not.

The study found no significant difference in the amount of alcohol consumed between the two groups. However, those with at least one alcoholic parent indicated having a greater number of social and familial problems related to their alcoholism than those individuals with no history of parental alcoholism.

Individuals with at least one alcoholic parent also experienced more anxiety and nervousness, had a weaker self-concept and had a tendency toward more aggressive and impulsive behaviours.[4]

Is there a difference between men and women problem drinkers who come from alcoholic families?

Yes. In the AFM study mentioned in the previous questions, male participants tended to be significantly more negatively affected by the presence of an alcoholic parent than did women. According to scores on various tests, men from families with parental alcoholism experienced more alcohol-related problems, more trait anxiety and lower egos.[5]

In what ways can children be affected by having an alcoholic parent?

In the United States, alcoholics represent only 7% of the population, yet their children have been estimated to account for approximately 20% of all referrals to child guidance clinics. A troubled child can be an indication of alcohol problems in a family.[6]

Also, boys of alcoholic parents are more likely to suffer from attention deficit disorders with hyperactivity than are children of non-alcoholic parents. Girls of alcoholic parents are more likely to experience eating disorders or depression later in life.[7]

Is there a difference in the impact on a child if the alcoholic parent is the mother?

A study by Emily Werner of 700 children in Hawaii found that children of alcoholic mothers had higher rates of problems in childhood and adolescence than did children of alcoholic fathers.[8]

What characteristics can help children of alcoholics avoid developing serious problems?

Werner's study identified children of alcoholics who did not develop serious coping problems by age 18. Those who were able to avoid serious problems featured a number of personal characteristics: a belief in taking care of themselves, an orientation toward achievement, a positive self-concept, and behaviours that were prompted more by their own feelings and beliefs than as a response to others. Werner also identified that boys had higher rates of psychosocial problems in childhood and adolescence than did girls.[9]

Does having a family history of alcoholism affect rehabilitation outcome for alcoholics?

There is some evidence that it does. In the previously discussed AFM study, follow-up data on 70% of the 451 original AFM clients indicated a good overall rate of success: 60% of the clients were either abstinent or drinking very moderately following rehabilitation. However, further analysis revealed that success was more likely to occur in individuals from families where alcohol did not play a part.

Specifically, 64% of the participants from addiction-free families were maintaining a responsible level of drinking or were abstinent, compared to about 52% of those from alcoholic families.[10]

In what ways does alcohol abuse affect family members?

Helena Fitzgerald of AFM's Family Services explains that in a healthy family system, the family exists for the good of the individuals. However, in a family system affected by addiction, the individual exists for the good of the system. Because of this, there may be rigidity within the family. One of the ways this rigidity is demonstrated is in the form of unwritten rules.

"Families with an alcoholic member unconsciously develop three rules: don't talk, don't trust and don't feel," says Fitzgerald.

For example, rather than talk about the problems an alcoholic father is causing, the wife and children may actually cover-up for him. Since the alcoholic is so unpredictable and trust is continually broken, the family walks around on egg shells. Finally, since they can't talk about the problem or trust the alcoholic, family members learn to avoid their hurt or angry feelings so they can keep functioning.

When a family has these kinds of rules, it becomes isolated as a family unit – it doesn't get the reality checks that may indicate that something is amiss. "An isolated family doesn't become exposed to the dynamics of healthy families," says Fitzgerald. "It's members don't know that there is a healthier way of living, and other people often don't know what's going on in the family."

How can counselling assist people who come from families affected by addiction?

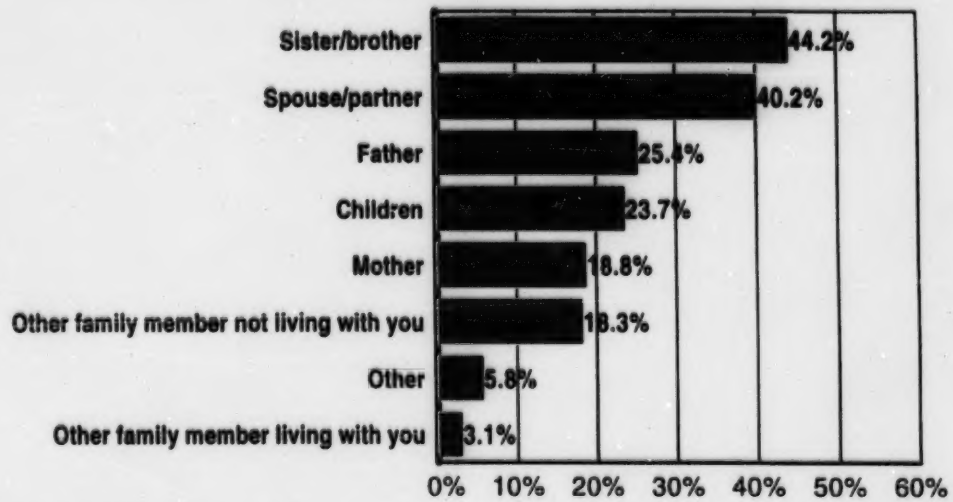
Counselling can assist family members to come out of the rigidity and isolation of the addictive family system. "Counselling can help people to start talking about what goes on in their family," says AFM's Fitzgerald. "It can help them to get in touch with their emotions, which have been shut down. They will begin to trust again – something they haven't been able to do because life with an addict is so unpredictable."

Fitzgerald says that counselling can help family members to talk, trust and feel again. If they can do these things, then their future relationships, as well as their current ones, will be profoundly and positively affected – regardless of whether or not the alcoholic continues to drink.

Do people who experience violence in a relationship abuse alcohol and drugs?

People who experience violence in a relationship are more likely to use alcohol or drugs than those in the general population. A Statistics Canada survey of 12,300 women conducted in 1994 revealed that one-quarter

Figure 19: Identity of Currently Addicted Family Members of AFM Family Program Clients



Source: Addictions Foundation of Manitoba. *Annual Statistical Review 2000-01.* p. 214.

of ever-married women who have lived with violence had used alcohol, drugs or medication to help them cope with their situation. Of those, 12% used alcohol, 9% used drugs or medication and 5% used both alcohol and drugs or medication.[11]

Is there a relationship between alcohol and family violence?

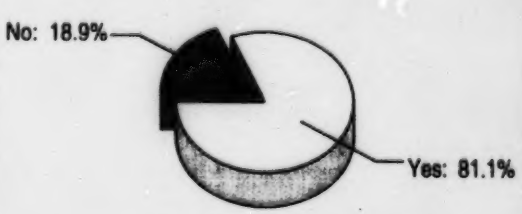
The National Violence Against Women Survey (1993) concluded that alcohol was a prominent factor in wife assault. In one-half of all violent relationships, the abuser was drinking. The rate of assaults against women who lived with men who drank regularly (four times a week or more) was triple the rate of those who lived with men who did not drink. The risk of violence by men who frequently consumed alcohol was six times the risk of violence from men who did not drink at all.[12]

What percentage of AFM Family Program clients grew up in a family with an addiction problem?

Over 80% of clients involved in AFM's Family Services Program reported that, at some time in their lives, they were aware of a family member who had an alcohol, drug, gambling or other addiction problem.[13] (See Figure 18.)

Of the 80% who grew up with an addicted family member, 73% report that a member of their family currently has an addiction problem. Of these, 44.2% report that the addict is their brother or sister, 40.2% say it is their spouse and 25.4% say it is their father. As Figure 19 shows, other currently addicted family members include mothers, children, other family members both living with and not living with the client, and individuals in the "other" category.[14]

Figure 18: Percentage of AFM Family Program Clients Ever Aware of Addiction in Family



Source: Addictions Foundation of Manitoba. *Annual Statistical Review 2000-01.* p. 213.

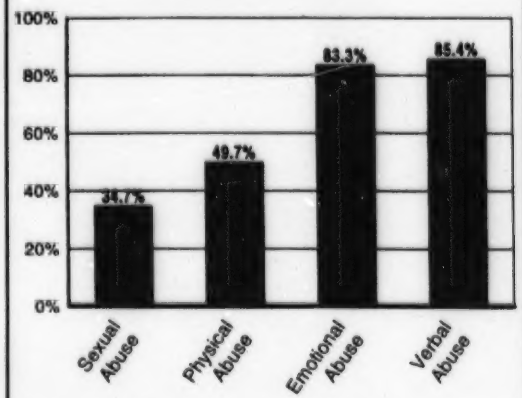
How many Family Program clients have ever been abused?

As well as growing up in a family with an addicted member (as seen in the previous question), a large percentage of these clients report that they have been emotionally, verbally, physically and/or sexually abused sometime in their lives. Specifically, 85.4% have been verbally abused, 83.3% have been emotionally abused, 49.7% have been physically abused and 34.7% report experiencing sexual abuse.[15] (See Figure 20.)

Do memories of past abuse or violence affect the present lives of Family Program clients?

For many, the answer is yes. Almost 60% report that memories of the abuse or violence they witnessed or suffered in the past affects their lives today.[16]

Figure 20: Percentage of AFM Family Clients Who Have Ever Been Abused



Source: Addictions Foundation of Manitoba. *Annual Statistical Review 2000-01*. p. 217.

Characteristics of Children of Alcoholics

Survival Role	Childhood Behaviour	Feelings	Representation to Family	Adult Characteristics: Negative	Positive
Family Hero or Super-kid	The family's "little mother/ little man"; always does what's right; over-achiever; over-responsible; needs everyone's approval; not much fun.	Hurt; inadequate; confused; guilty; afraid; low self-esteem	Provides sense of worth to family; someone to be proud of.	Workaholic; needs to control and manipulate; compulsive; can't say "no"; believes he/she is always right and can't fail.	Competent; organized; responsible.
Scape-goat or Problem Child	Hostile; defiant; withdrawn; sullen; troublemaker.	Hurt; abandoned; angry; rejected; inadequate; low self-esteem.	Takes the focus for the family. For example: "See what he/she's done!"	Alcohol or drug-dependent; conflicts with the law.	Courageous; good under pressure; can see reality; helps others; takes risks.
Lost Child	Loner; day-dreamer; solitary; withdrawn; seems to "drift" through life; quiet; shy; ignored.	Unimportant; lonely; hurt; abandoned; defeated; not allowed to have feelings.	Provides the family with sense of relief. For example, no one worries about her/him.	Indecisive; no zest for living; solitary; can't say "no."	Independent; talented, creative; imaginative; assertive; resourceful.
Mascot or Family Clown	Cute; immature; needs attention; fragile; needs protection; hyper-active; short attention span; anxious.	Afraid; lonely; inadequate; low self-esteem.	Provides the family with comic relief, fun and humour.	Compulsive; clown; can't handle stress.	Charming; quick-witted; good sense of humour; independent; helpful.

Source: Addictions Foundation of Manitoba. *The Physician's Handbook*. 1994

Chapter 7

FETAL ALCOHOL SYNDROME: THE EFFECTS OF ALCOHOL ON THE UNBORN CHILD

What exactly does FAS mean?

A woman who drinks alcohol while she is pregnant risks damaging her unborn baby. Babies born to mothers who drink during pregnancy may show signs of physical, mental and behavioural abnormalities. These birth defects are known as Fetal Alcohol Syndrome (FAS) or Partial Fetal Alcohol Syndrome (pFAS).

Consumption of alcohol during pregnancy is the leading known cause of birth defects and mental disabilities.[1] It is 100 percent preventable.

How long has FAS been recognized by the medical community?

FAS was first defined and recognized as a birth defect in 1973.[2] However, the connection between drinking during pregnancy and the harmful impact on children was recorded as early as the eighteenth century during the "Gin Epidemic" in England. A report to the British Parliament suggested that the gin problem caused "weak, feeble and distempered children who must become the charge of their country."[3]

How can a mother hurt her unborn baby by drinking alcohol?

If a woman drinks when she is pregnant, her baby drinks, too. Alcohol passes through the placenta and on to the baby. This can have devastating effects on a child even before it is born.

Alcohol can hurt the baby even before the mother feels its effects. And, it stays in the baby longer than in the mother because the baby's system is unable to break it down.

Alcohol can damage a growing baby's brain, organs and body. This damage can affect how a baby thinks, acts, looks and learns as a child and an adult.

How is FAS diagnosed?

Formal diagnosis is based on four criteria:

- prenatal exposure to alcohol (confirmed or unconfirmed)
- growth retardation (weight and height)
- facial characteristics
- neurodevelopmental problems

Facial malformations can include small eye openings, thin upper lip, flat midface (cheekbones), short nose, indistinct groove between nose and upper lip (philtrum), low nasal bridge, minor ear anomalies and abnormal smallness of the jaw.[4]

Some of the neurodevelopmental disorders include small head circumference, memory problems, bonding concerns, impaired or altered motor skills, learning disabilities, delayed development, hyperactivity, attention deficit disorder, inability to appreciate consequences of actions, problems with reasoning and judgment, and impaired visual/spatial skills.[5]

What is meant by the terms FAE, ARBD, ARND and pFAS?

Not all children are affected in the same way by prenatal exposure to alcohol. Fetal Alcohol Effects (FAE) was a term applied to children who were adversely affected by prenatal exposure to alcohol, but who do not meet all four of the criteria for FAS. The term FAE has been replaced in the medical community by the more specific terms ARBD, ARND and pFAS.

Partial Fetal Alcohol Syndrome (pFAS) refers to a child who exhibits some but not all of the physical signs of FAS, but who also shows learning and behavioural issues which imply central nervous system damage.[6]

Alcohol-related birth defect (ARBD) refers to an isolated physical abnormality which is one or more of the birth defects associated

with fetal alcohol exposure. Alcohol related neurodevelopmental disorder (ARND) means the child exhibits one or more of the neurodevelopmental abnormalities associated with fetal alcohol exposure, such as problems with cognitive development, visual/spatial skills and motor development.[7]

Is there a safe amount of alcohol that can be consumed during pregnancy?

There is no known safe amount of alcohol a pregnant woman can drink.

The tragedy of FAS/pFAS is that it is entirely preventable.

Alcohol hurts a baby most when it is growing. A baby grows inside its mother the whole time she is pregnant, so drinking at any time could hurt the baby. No one has found an amount of alcohol that is safe to drink during pregnancy. Of course, the risk of damage increases the more a woman drinks, so the safest choice is not to drink at all.

If a woman stops drinking before she tries to become pregnant and remains alcohol free during her pregnancy, her baby will not develop FAS or any alcohol-related birth defects.

Research indicates the possibility of damage occurring during the first trimester when organs are formed. If drinking continues during pregnancy, additional damage can occur, as the baby's brain develops during the whole nine months. The brain is particularly sensitive to alcohol during the period of rapid growth in the third trimester.[8]

What is known about the effects of low levels of alcohol consumption during pregnancy?

A recent American study of 501 parent-child diads investigated the effect of prenatal alcohol exposure on the behaviour of six- to seven-year-old children. Three-quarters of the mothers had used alcohol during pregnancy, 63.8% of these at low levels (> 0 but < 0.3 fluid ounces of absolute alcohol per day) and 13% at moderate to heavy levels (≥ 0.3 fluid ounces of absolute alcohol per day). The researchers used the Achenbach Child Behavior Checklist (ACBA), an instrument widely utilized in the assessment of children's behaviour problems.

Results indicated that: "Maternal alcohol consumption even at low levels was adversely related to child behaviour...The effect was observed at average levels of exposure of as low as one drink per week." The conclusion of the study went on to say that: "Clinicians are often asked by pregnant women if small amounts of alcohol intake are acceptable during pregnancy. These data suggest that no alcohol during pregnancy is the best medical advice."[9]

Does it help if the mother stops drinking?

Because more than 50% of pregnancies are unplanned, a woman may continue to drink unaware that she is pregnant. Many do not know they are pregnant until they miss one or two menstrual cycles. If the mother stops drinking, she increases her chances of delivering a healthy baby or limiting the negative effects.[10]

What factors play a role in FAS?

Research suggests that the mother's age, state of nutrition, metabolism, general health, drinking pattern, use of other drugs (including prescription drugs, tobacco and caffeine) and the genetic susceptibility of both the mother and the fetus are factors that may contribute to FAS.[11]

Does paternal drinking have any effect?

While the effects of paternal drinking are not fully known, alcohol can result in a lower sperm count and abnormal sperm, reducing the likelihood of pregnancy and, if pregnancy occurs, there is a high likelihood of early spontaneous abortion.[12]

Children of alcoholic fathers have been shown to have defects in intellectual function, such as learning and memory, and to be more hyperactive than children of non-alcoholic biological parents. However, there is no conclusive evidence that paternal drinking before conception causes direct adverse effects on the fetus. What is known are the enormous negative social effects of the father's drinking, especially since women most often drink with their partners.[13]

What is the incidence rate of FAS?

Each year in Manitoba, approximately 240 babies are born with Fetal Alcohol Syndrome. Studies suggest that FAS may affect as many as 10% of children in some Manitoba communities.[14]

In one week, as many as 10,000 babies are born in Canada. Of these, three are born with Muscular Dystrophy, four are born with HIV infection, eight are born with Spina Bifida, 10 are born with Down's Syndrome, 20 are born with FAS and 100 are born with other alcohol-related birth defects.[15]

A report prepared for Health Canada states that frequent and per-occasion drinking rates are highest among younger Canadian women (age 15-24), with indications that rates increased substantially during the 1990s. Approximately 20% of Canadian women report drinking during pregnancy.[16]

What are the economic costs associated with FAS?

The lifetime economic costs associated with health, education, justice and social services have been estimated at $1.5 million dollars per child (Manitoba Children and Youth Secretariat, Strategy Considerations for Developing Services for Children and Youth, 1997).[17] Others suggest the estimated economic cost for the care of an FAS victim, depending on the severity, ranges from $3 million to $6 million.[18]

What happens to babies and children born with FAS?

The consumption of alcohol during pregnancy can lead to a variety of alcohol related birth disorders in a baby. These defects can be severe or imperceptible.

Individuals with FAS have a higher frequency of birth disorders than the general population. The disorders may involve the craniofacial area, mouth (cleft palate, crooked teeth, speech problems), skeleton, skin, heart, brain, spinal cord and kidneys. For example:

- Their brain is damaged forever, so they have trouble following simple instructions or remembering things.

- They are small and don't grow normally.
- Their faces look different, such as small eyes and thin lips.
- They are often "colicky" babies and "hyper" children.
- They might have trouble seeing, hearing or speaking.
- They might have heart or kidney problems.

What happens to FAS babies when they get older?

The adverse effects of prenatal exposure to alcohol are permanent and irreversible. A person does not "outgrow" them. Lifelong support and assistance is required for affected individuals to maintain employment, housing and relationships with family, friends and partners. Many come into contact with the justice system.[19]

Here are some examples of what can happen as they get older:

- They often have trouble controlling how they act and get along with other people.
- They have trouble paying attention and learning at school.
- They struggle with depression and may have drug and alcohol problems.
- They have trouble holding a job.
- They often get into trouble with the law.

What is the connection with the criminal justice system?

Children with FAS or other alcohol related birth defects appear to be at increased risk of offending. Many of the behavioural features that are characteristic of children with FAS/pFAS, such as attention deficits, hyperactivity and impulsivity, have been shown in longitudinal studies to be predictors of delinquency and adult criminal behaviour. However, few studies have been done reporting the prevalence of FAS/pFAS in prisons.[20]

The cognitive, social and behavioural problems faced by individuals with FAS/pFAS are believed to lead these individuals into trouble with the law, and then create further problems for them during incarceration.[21]

Children with pFAS may be more likely to be involved with the criminal

justice system later in life than are children with FAS because their symptoms are often not recognized and they fail to get the help they need.[22] They are also probably more likely to go undetected within the criminal justice system.

A recent study of young offenders in Saskatchewan revealed that nearly 50% had been born with FAS. Manitoba also found that over 50% of the young people in detention suffer from some degree of FAS.[23]

Does FAS mean mental retardation?

A common misconception is that FAS implies mental retardation. People with FAS can have normal and above average intelligence. While there is injury to the brain, each affected person has specific areas of strength and weakness.[24]

However, a follow-up study of 61 adolescents and adults with FAS determined that even with a normal IQ range, there could be damage to the organization of the brain leading to developmental and behavioural problems. Persons within the normal IQ range showed maladaptive behaviour, such as failure to consider the consequences of their actions, a lack of appropriate initiatives, unresponsiveness to social cues and a lack of reciprocal friendship.[25]

Does a diagnosis of FAS mean there is no hope?

It is generally accepted that an early diagnosis combined with support and intervention strategies will improve the likelihood of a positive outcome for an infant affected by prenatal alcohol exposure. As well, the ever-increasing number of new approaches for use by parents and workers is helping to improve the outlook for all alcohol-affected children.

Children who do not exhibit the physical characteristics of prenatal exposure to alcohol can actually be at greater risk of a poor outcome because the disability is hidden.[26] A child who looks normal, but behaves inappropriately, may be labelled as a "bad" kid or as a child who has had poor parenting.

The key for family members, workers and society to remember is that a child affected by FAS *can't* sit still, it's not that he *won't*.[27] It is also important to recognize the gifts of an alcohol-affected child and set realistic expectations that do not limit his or her aspirations. As one affected teenager once said: "Don't tell me what I cannot do, help me find a way to do it."[28]

Chapter 8
DRINKING & DRIVING

What does BAC mean?

BAC means Blood Alcohol Concentration. It refers to the weight of alcohol (expressed in milligrams) in a standard volume of blood (usually 100 millilitres). So, a BAC of .08% means that the person has 80 milligrams of alcohol per 100 millilitres of blood. BAC can be expressed as .08 or .08% or 80 mg%.[1]

Breathalyzers are used to measure BAC because the amount of alcohol in the breath is directly proportional to the amount of alcohol in the blood. A blood sample can also be analyzed to measure BAC.[2]

Blood samples are more accurate, but Breathalyzer readings have been found to be reliable and valid. As taking a blood sample is intrusive, police officers in Canada use Breathalyzer units to check drivers' BACs.[3]

How do different BAC levels affect driving ability?

As discussed in chapter two, alcohol affects individuals in many ways depending on a variety of factors, such as BAC, body weight, food intake, regularity of consumption and the chronic versus temporary nature of a person's drinking. A whole array of changes take place in the body, affecting such things as mood, motor skills, concentration, visual acuity and, with chronic users, liver, cardiovascular and immune system functioning.

When it comes to driving ability, the effects of alcohol are well known, and that is why Canada and many jurisdictions around the world have made it illegal to drive with a BAC over the legislated limit. So, what exactly does alcohol do that makes mixing it with driving a dangerous undertaking?

First of all, it must be noted that driving is a complex action that requires drivers to use many skills at once. For example, they must watch the road while scanning dangers in the periphery zone – such as a child stepping off a curb or another vehicle running a red light. They must maintain the speed limit, keep the vehicle in the correct lane and judge the distance between themselves and a stationary object in order to brake at the appropriate time.

With alcohol consumption, the ability required to coordinate all of these actions diminishes the more one drinks. Even at low BACs, subtle changes effect driving ability. For example, after drinking, rapid eye movement slows down and drivers make fewer visual scans, tending to look at one thing – such as a traffic sign – for longer periods of time. Therefore, important objects in other parts of the environment can be missed.

As well, drivers experience reduced ability to judge the distances between moving objects, some at BACs as low as .02%. Night driving brings additional problems, as low levels of alcohol impairs one's ability to adjust to sudden darkness. So, recovering from the glare from oncoming traffic lights takes longer.

Physical skills are affected. Impaired drivers take longer to break, for example. Also, the decision-making ability of drivers is affected: they take longer to correct steering, or may oversteer, or even steer in the wrong direction – with tragic consequences.[4]

Figure 21 shows driving related effects at different BAC levels and the fatal crash risk compared to sober drivers.[5]

Figure 21: Effects of BAC on Driving & the Risk of a Fatal Crash

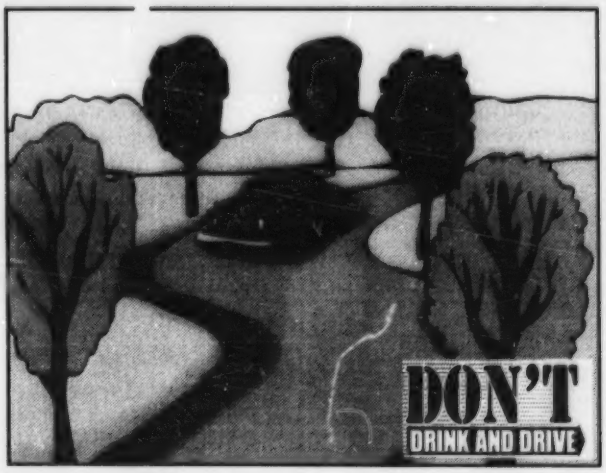
BAC Level	Effects on Driving	Fatal Crash Risk (compared to sober)
.02 - .03	Mild changes, bad driving habits somewhat more evident.	1.4 x higher
.04 - .06	Driving skills more clearly impaired. Reaction time, vision, cognitive skills slowed.	2 - 9 x higher
.07 - .09	Physical difficulty in driving a vehicle.	11 x higher
.10 - .12 .13 - .15	Judgement more seriously affected. Physical & mental coordination impaired. Distorted perception & judgement. Driving erratic.	48 x higher
.16 - .20 .21 - .25	Irresponsible behaviour. Disturbance of vision & perception. Severe impairment of physical & mental skills.	380 x higher
.26 - .30	Driver has probably passed out.	
.31 - .44 .45+		

Source: Weinrath, Michael; Kaplan, Gerry. *A Summary of Research Findings on Alcohol's Effects on Driving, and the Relationship Between Fatal Crash Risk and Blood Alcohol Concentration.* Addictions Foundation of Manitoba. August, 1999. p. 23.

Why do impaired individuals often drive despite the dangers?

People drive even after they have been drinking for three main reasons:

- They don't plan ahead.
- They make decisions after consuming alcohol when their judgement is altered.
- They take risks: they feel they won't get caught rather than thinking about injuries they may cause to themselves or others.



DRINKING & DRIVING STATISTICS

What percentage of drivers in Canada admit to driving after drinking?

The Traffic Injury Research Foundation developed an annual public opinion survey called The Road Safety Monitor. The results of the most recent survey were released in November 2001. The survey found that:[6]

- 16.7% of survey respondents reported driving a vehicle within two hours of consuming alcohol in the past 30 days. That translates into 3.6 million Canadians.
- 7.3% of survey respondents said they had driven when they thought they were impaired at some time during the past year. This translates into 1.6 million Canadians who knowingly drove even though they thought they were over the legal limit.
- Drivers age 19 to 24 most often reported driving after drinking (23%). About one in five drivers in the 25 to 49 age group said they drove after drinking. A small percentage (2%) of those in the 16 to 18 age group admitted to driving after drinking.
- The survey estimated that there were more than five million impaired driving trips that took place on Canadian roads in the past year. However, only a small percentage of drivers are responsible: an estimated 5% of drivers account for 87% of the five million impaired driving trips.

In what percentage of motor vehicle collisions in Canada is alcohol involved?

Motor vehicle collisions were the cause of almost half (48%) of all reported severe injuries in Canada during 1999 and 2000. The Canadian Institute for Health Information (CIHI) reports that one out of every eight of these collisions involved individuals who had consumed over the legal limit of alcohol.[7]

Has the number of deaths from alcohol-related traffic collisions decreased?

Yes. In 1999, 1,134 people were killed in alcohol-related collisions in Canada. On average, that's about three people a day. In 1993, alcohol-related collisions took the lives of 1,680 people on Canadian roads, an average of 4.5 people each day.[8]

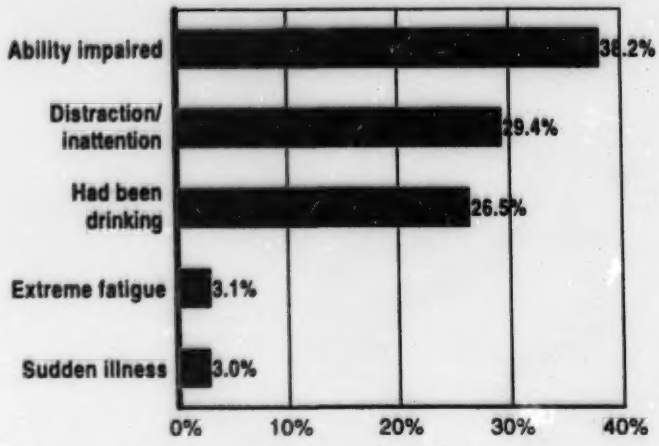
How many people are killed or injured in traffic collisions each year in Manitoba?

In the 10-year period between 1990 and 1999, 1,185 people were killed (an average of 118 per year) and 125,234 were injured (an average of 12,523 each year).

The actual number of people killed each year during this period ranged from a high of 134 in 1993 to a low of 93 in 1996. The 113 killed in 1999 was the second lowest figure in the 10-year period and is 6.6% below the 121 fatalities recorded in 1998 and 1990.

The actual number of people injured each year during this period ranged from a high of

Figure 22: Comparison of At-Fault Human Conditions in Fatal Collisions in Manitoba: 1999



Source: *Traffic Collision Statistics Report.* Manitoba Transportation and Government Services. 1999. p. 83.

16,104 in 1992 to a low of 9,148 in 1997. Although there was a small rise in the percentage injured between 1998 and 1999, the number of people injured in 1999 (9,697) is 27.9% below the level in 1990, when 13,450 people were injured in traffic collisions.[9]

In how many of the fatal collisions in Manitoba is alcohol a factor?

In 1999, 64.7% of the at-fault drivers in fatal traffic collisions had consumed alcohol. Of these, 38.2% had their driving ability "impaired by alcohol," and 26.5% "had been drinking."[10] See Figure 22.

In how many of the collisions resulting in injury is alcohol a factor?

In 1999, alcohol consumption was a factor in 27.9% of collisions resulting in injury. Of these, 19.9% of the at-fault drivers had their ability "impaired by alcohol" and 8% "had been drinking."[11]

What is the role of alcohol in snowmobile driver deaths across Canada?

When people think about drinking and driving, they usually imagine cars barrelling down highways with impaired drivers at the wheel. However, off-road vehicles, such as snowmobiles, also have more than their share of inebriated operators who leave behind a trail of carnage.

Statistics back up this statement. In Canada between 1987 and 1998, 698 snowmobile operators who died in crashes were tested for presence and amount of alcohol. A total of 70.6% tested positive for alcohol, compared to 46% of drivers of highway vehicles in Canada who were fatally injured during the same period.

Of the 70.6% of fatally injured snowmobile operators who tested positive, about one in five (21.3%) were under the legal limit. A further 25.8% were over the legal limit with BACs between .08% and .15%, and over half of the drivers (52.9%) were well over the legal limit with over .15% BACs.[12] (See Figure 23 next page.)

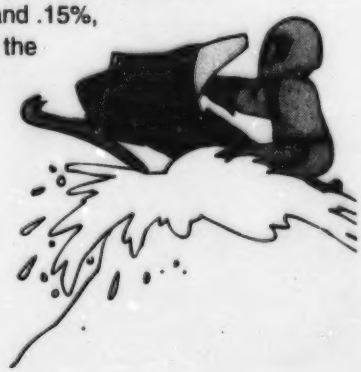
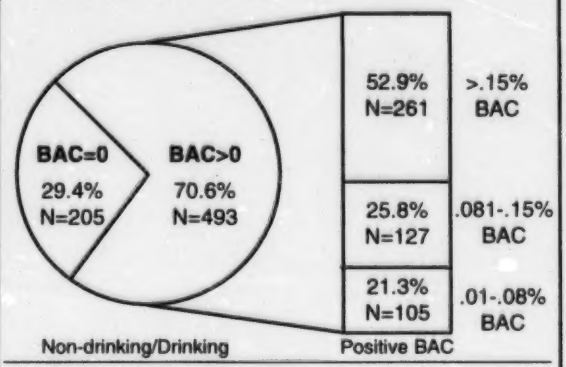


Figure 23: BACs of Fatally Injured Snowmobile Drivers 1987-1998



Source: Beirness, Douglas J. "Alcohol Involvement in Snowmobile Operator Fatalities in Canada." *Canadian Journal of Public Health.* September-October 2001. p. 359.

Do snowmobiles account for many of the off-road vehicle fatalities in Manitoba?

Yes. In 1999, eight people died as a result of off-road vehicle collisions, and four of these were on snowmobiles. Of the 96 people injured in off-road vehicle collisions that year, 53 were hurt on snowmobiles.[13]

Does alcohol play a role in off-road vehicle collisions in Manitoba?

Yes. There were 110 off-road vehicle collisions (snowmobiles, all terrain vehicles, other) in Manitoba in 1999 resulting in death, injury or property damage.[14] Of the 139 drivers involved in these collisions, 15.8% were "at-fault" due to human condition factors. The most commonly reported at-fault conditions were "ability impaired by alcohol," "distraction/inattention," and "had been/suspected alcohol use."[15]

In general, what can be said about changes in the drinking and driving situation over the past two decades?

In general, the number of impaired drivers on Canadian roads decreased dramatically during the 1980s when public opinion about the problem spurred jurisdictions to initiate countermeasures, such as more stringent laws and stronger law enforcement efforts. During the 1990s, progress continued but was less dramatic. A possible explanation for this is that the countermeasures had the strongest effect on social drinkers, but "had less impact on that group of heavier drinkers who frequently drive after drinking and often with high BACs."[16]

Many jurisdictions, including Manitoba, have acknowledged that this group needs to be dealt with effectively so that the damage done through drinking and driving can be further decreased.

DRINKING & DRIVING LEGISLATION

When was the first drinking and driving law passed in Canada?

The 1921 Criminal Code of Canada outlawed drinking and driving for the first time. The new law stated that anyone driving a motor vehicle or automobile while intoxicated was guilty of an offence. The law did not define "intoxicated."[17]

When did Canada make it illegal to drive with a BAC limit in excess of .08%?

On December 1, 1969, legislation was proclaimed establishing a BAC limit of .08%. The legislation also made breath tests compulsory. Anyone failing or refusing to provide a breath sample would be committing an offence equivalent to that of driving while impaired or driving with a BAC over .08%.[18]

What are the consequences of having a .05% BAC in Manitoba?

If drivers register a "warn" (between .05 and .08% BAC), they will receive an immediate 24 hour licence suspension.

If a second 24 hour suspension is received within three years, the person must undergo mandatory alcohol assessment through the Addictions Foundation of Manitoba's Impaired Driving Program. Those failing to comply will lose their licences until they do comply. A $40 reinstatement fee is imposed.

This legislation acknowledges that impairment actually starts at lower BAC levels. The alcohol assessment forces people who continue to drink and drive to look at their drinking and driving behaviour.

If someone is convicted of driving while over the legal .08% BAC, how long is the licence suspension in Manitoba?

Under Manitoba's Highway Traffic Act, the length of the licence suspension is dependent upon the category of the offence and the number of prior convictions. There are two categories, as follows:[19]

CATEGORY A INCLUDES:

- impaired driving
- driving over .08% BAC
- refusal to provide a breath sample or blood sample

The licence suspensions for Category A offences are:

- one year for a first conviction (except for refusing to provide a sample, which is two years)
- five years for a second conviction (except for refusing to provide a sample, which is seven years)
- 10 years for a third conviction
- lifetime for four or more convictions

CATEGORY B INCLUDES:

- impaired driving causing death
- impaired driving causing bodily harm

The licence suspensions for Category B offences are:

- five years for a first conviction
- 10 years for a second conviction
- lifetime for three or more convictions

An offence will be counted as a repeat offence if it is committed within ten years of the prior offence.

These licence suspensions are meant to act as a deterrent to those who continue to take risks with alcohol and their vehicles. For example, if drivers learn their lesson after the first impaired driving charge, they'll drive again within one year, providing all re-licensure requirements imposed by the Registrar of Motor Vehicles have been satisfied. However, if they reoffend anytime within 10 years, the consequence is a much more severe five year licence suspension – or longer depending on prior criminal code convictions.

If a person chalks up four or more impaired driving convictions within 10 years, they will never be allowed to drive again.

Can a person convicted of impaired driving still drive an off-road vehicle, such as a snowmobile?

No. Manitobans who have had their licences suspended for drinking and driving cannot drive off-road vehicles for the duration of the suspension.

Is there any situation in which a person with a suspended licence can drive?

Yes. An impaired driver can make an appeal to the Licence Suspension Appeal Board to drive for specific purposes. This occurs because, in some instances, the federal prohibition against driving ends before the provincial suspension ends. The Appeal Board will not allow a hearing until after the prohibition period is over.

For example, drivers convicted of a second drinking and driving offence are prohibited (federally) from driving for a minimum of two years and a maximum of five years. Under the Manitoba Highway Traffic Act, these individuals have their licences suspended for five years or longer, depending on the category and type of offence. Therefore, when someone receives the two year federal prohibition, his or her licence is still suspended for at least three more years under the Manitoba Highway Traffic Act. During those three years, the person can make an appeal and may be allowed to drive for purposes such as getting to and from work.[20]

Are there other consequences for impaired driving besides licence suspensions in Manitoba?

Yes. Depending on BAC and number of prior offences, impaired drivers will have their vehicles impounded for various lengths of time. For example, for a first offence with a BAC over .16%, the vehicle is impounded for 60 days.

Impaired drivers also face possible fines, jail sentences, a criminal record and loss of vehicle insurance coverage, as well as a surcharge on their licence resulting from the demerits that may have been assessed for the

conviction. For more information, contact the Driver and Vehicle Licensing offices in your region.[21]

What is the monetary cost to someone charged with impaired driving?

The cost of an impaired driving charge varies depending upon the category and type of offence. In the example of a first time offender who pleads guilty and who did not cause death or bodily harm, the cost will be:[22]

- $400 to $600 for vehicle impoundment fees
- $300 for an Addictions Foundation of Manitoba assessment
- $40 in re-licencing fees
- $500 to $1,000 for legal fees
- a minimum $600 fine plus a $90 surcharge
- $300 to $999 for demerit points on licence, plus surcharge
- $500 to $2,000 in loss of vehicle insurance coverage
- $500 to $1,000 impact on car insurance
- $200 to $1,200 if at fault for a collision.

Therefore, the cost of this impaired charge could range from $3,430.00 to $7,829.00. And that's not including all the cab and bus fares needed to get around during the time the licence is suspended.

Are there any situations in which a BAC of zero is legislated?

Yes. As of October 1, 2001, all drivers – regardless of their age – who hold a learner's licence, a probationary licence and motorcycle drivers who hold a motorcycle instruction permit must maintain a zero BAC when driving. As of April 1, 2002, all new learner drivers became involved in the Graduated Driver Licencing program (GDL). This program has three stages: learner (nine months), intermediate (15 months) and full driver (one year.) During the two years of the GDL, drivers must maintain a zero BAC.[23]

Who must access the Addictions Foundation of Manitoba's Impaired Drivers Program?

Anyone who is charged or convicted of impaired driving or who has received two or more roadside warnings in a three year period is required under the Manitoba Highway Traffic Act to access the AFM's Impaired Drivers Program prior to licence reinstatement.

In the last decade, AFM's Impaired Drivers Program has been a prototype for the rest of Canada. Its goals are to intervene on drinking and driving behaviours, as well as on drinking behaviours.

The program as a whole is viewed as an intervention process. The purpose is to assess offenders' level of involvement with alcohol and other drugs. Then, appropriate services are provided, giving them the opportunity to make the necessary changes in their behaviour. These changes will prevent offenders from placing themselves or others at risk in the future.

ENDNOTES

Chapter 1
HISTORICAL FACTS ABOUT ALCOHOL

1 Kinney, Jean. *Loosening the Grip: A Handbook of Alcohol Information.* Sixth Edition. McGraw-Hill Higher Education. 2000. p. 2.

2 Ibid. p. 3.

3 Ibid. p. 2.

4 Ibid.

5 Ibid.

6 Ibid. p. 3.

7 Ibid.

8 Ibid. p. 9.

9 Lender, M.E.; Martin, J.K. *Drinking in America: A History.* The Free Press. New York. 1982. p. 7.

10 Kinney, supra, n. 1, p. 13.

11 Ibid. p. 15.

12 Hutt, Marten. *Māori & Alcohol: A History.* Alcohol Advisory Council of New Zealand. See: www.alcohol.org.nz/maori/history

13 Beauvais, Fred. "American Indians and Alcohol." *Alcohol Health & Research World: Spotlight on Special Populations.* Vol. 22, No. 4. 1998. p. 253.

14 Kinney, supra, n. 1, p. 4.

15 Smart, R.G.; Ogborne, A.C. *Northern Spirits: A Social History of Alcohol in Canada.* Addiction Research Foundation. Toronto. 1996. p. 1.

16 Ibid. pp. 5-6.

17 Ibid. p. 7.

18 Ibid. pp. 9-10.

19 Ibid. p. 12.

20 Ibid. p. 44.

21 Kinney, supra, n. 1, pp. 10-11.

22 Smart & Ogborne, supra, n. 15, pp. 15-16.

23 Ibid. p. 22.

24 Ibid. p. 60.

25 Ibid. pp. 48-49.

26 Ibid. p. 51.

27 Ibid. p. 51.

28 Ibid. pp. 51-52.

29 Ibid. p. 60.

Chapter 2
FASTFACTS ABOUT ALCOHOL FROM AROUND THE GLOBE

1 World Health Organization (WHO), Global Status Report On Alcohol. Geneva. 1999. p. ii and p. 2.

2 Ibid. p. viii & p. 16.

3 The Globe Special Edition, Towards a Global Alcohol Policy: The Proceedings of the Global Alcohol Policy Advocacy Conference, Syracuse, New York: August 2000. Edited by Andrew Varley. "Global Overview of Alcohol Problems," Dr. David Jernigan, p. 5.

4 WHO, supra, n. 1, p. 6.

5 The Globe, supra, n. 3, p. 5.

6 WHO, supra, n. 1, p. 16.

7 Ibid. p. 7.

8 Ibid. p. 8.

9 Ibid. p. viii.

10 Ibid. pp. 10-13.

11 Ibid. pp. 13-15.

12 Ibid. p. 22.

13 Ibid. p. 23.

14 Ibid.

15 Ibid. p. 24.

16 Ibid. p. 25.

17 Ibid. p. 28.

18 Ibid. pp. 29-30.

19 Ibid.

20 Ibid. pp. 21-22.

21 Ibid. p. 45.

22 Ibid. pp. 50-52.

23 Ibid. p. 55.

24 Ibid. p. 59.

25 Statistics Canada. *Health Indicators.* April 2001. Catalogue no. 82-221 XIE.

26 Ibid.

27 *Canadian Profile: Alcohol, Tobacco and Other Drugs 1999.* Centre for Addiction and Mental Health, Addiction Research Foundation and Canadian Centre on Substance Abuse. p. 23.

28 Ibid.

29 Ibid. p. 17.

30 *The Control and Sale of Alcoholic Beverages in Canada – Fiscal year ended March 31, 2000.* Statistics Canada, Catalogue no. 63-202-XIB. p. 10.

31 Ibid.

32 Ibid. pp. 22 & 23.

33 Ibid. p. 17.

34 *The Control and Sale of Alcoholic Beverages in Canada – Fiscal year ended March 31, 1996.* Statistics Canada. January 1998. p. 8.

35 *Legislation Digest.* Brewers Association of Canada. August 20, 2001. Federal Section, p. 3.

36 Ibid. pp. 15-17

37 Ibid.

38 *Annual Statistical Review.* Addictions Foundation of Manitoba. 2001-01. p. 77.

39 Ibid. p. 122.

40 Ibid. p. 125.

41 Ibid. pp. 98-99.

42 Ibid. p. 85.

43 *Manitoba Liquor Control Commission 78th Annual Report 2001 (for the fiscal year April 1, 2000 to March 31, 2001.)*

44 *Spending Patterns in Canada 1999.* Statistics Canada. August 2001. p. 49.

45 Ibid. p. 51.

46 *The Addictions Foundation of Manitoba, Home production of wine and beer in Manitoba households: A prevalence study.* June 1999.

47 *Legislation Digest,* supra, n. 35, Manitoba Section, p. 4.

48 Ibid. p. 11.

Chapter 3

THE EFFECTS OF ALCOHOL ON THE INDIVIDUAL

1 *Alcohol and Health: From the Secretary of Health and Human Services September 1993.* U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute on Alcohol Abuse and Alcoholism. p. xxi.

2 Ibid. p. 115.

3 Wisconsin Clearinghouse. *Facts About Alcohol and Alcoholism.* pp. 2-13.

4 Traffic Injury Research Foundation website. www.trafficinjuryresearch.com/faq/faq/htm

5 Weinrath, Michael; Kaplan, Gerry. *A Summary of Research Findings on Alcohol's Effects on Driving, and the Relationship Between Fatal Crash Risk and Blood Alcohol Concentration.* Addictions Foundation of Manitoba. August, 1999. p. 4

6 Herscovitch, Arthur. *Alcoholism: From Recognition to Recovery.* Addiction Research Foundation. Toronto, Canada. 1989. p. 17.

7 Ibid. p 18.

8 Weinrath, supra, n. 5, p. 5.

9 Wisconsin Clearinghouse, supra, n. 3, p. 8.

10 Weinrath, supra, n. 5, p. 23.

11 College Health Information Network, Western Virginia University Campass. Website source: http://www.ucompass.com/alc3.html

12 Medicine Net, Inc. Website source: http://www.medicinenet.com

13 College Health Information Network, supra, n. 11

14 Canadian Liver Foundation. 365 Bloor St. E. – Suite 200, Toronto, Ontario, M4W 3L4. 1-800-563-5483. Website source: http://www.liver.ca/docs/liver.html#alcohol

15 Ibid.

16 American Liver Foundation. 1425 Pompton Ave, Cedar Grove, NJ 07009. 1-800-GO LIVER (465-4837). Website sources: http://www.sadieo.ucsf.edu/alf/alffinal/toplivdis-faqs.html (100 Frequently Asked Questions (FAQ's) on Liver Disease) and http://sadieo.ucsf.edu/alf/alffinal/infofattyliver.html (Fatty Liver).

17 Ibid.

18 Ibid.

19 Canadian Liver Foundation, supra, n. 14.

20 American Liver Foundation, supra, n. 16.

21 Ibid.

22 *The Costs of Substance Abuse in Canada (Highlights).* Canadian Centre on Substance Abuse. 1996.

23 *The Costs of Substance Abuse in Manitoba.* The Addictions Foundation of Manitoba and Canadian Centre on Substance Abuse. 1996.

24 *Alcohol and Health: From the Secretary of Health and Human Services September 1993,* supra, n. 1, p. xxvii.

25 Hoeschen, L.E. *A Physician's Manual of Substance Abuse and Dependence.* Addictions Foundation of Manitoba. 2000. p. 19.

26 Wisconsin Clearinghouse, supra, n. 3.

27 *Annual Statistical Review.* Addictions Foundation of Manitoba. 2000-01. p. 103.

28 *The Costs of Substance Abuse in Manitoba,* supra, n. 23.

29 *Annual Statistical Review,* supra, n. 27, p. 104.

30 Jean Kinney & Gwen Leaton. *Understanding Alcohol (2nd edition).* Mosby Yearbook. St. Louis. 1992. p. 86.

31 Hoeschen, L.E., supra, n. 25, pp. 24-25.

32 Ibid. pp. 25-26.

33 *Alcohol and Health: From the Secretary of Health and Human Services September 1993.* supra, n. 1, p. 113.

34 *F.Y.I. Newsletter,* January 1994. Heart & Stroke Foundation of Manitoba.

35 *The Costs of Substance Abuse in Canada (Highlights),* supra, n. 22, p.16.

36 *The Costs of Substance Abuse in Manitoba,* supra, n. 23, p. 18.

37 *Position on Low-Risk Drinking.* Addictions Foundation of Manitoba. 1997.

Chapter 4
Alcohol & Youth

1 Patton, D.; Brown, D.; Broszeit, B.; and Dhaliwal, J. *Substance Use Among Manitoba High School Students, October 2001.* Addictions Foundation of Manitoba. p. 9.
Note: This report is available on the AFM website at www.afm.mb.ca/hssu.pdf

2 Ibid. p. 1

3 Ibid. p. 10

4 Ibid. p. 14

5 Ibid. p. 11

6 Ibid. p. 10

7 Ibid. pp. 11-12

8 Ibid. p. 9

9 Ibid. p. 6

10 Ibid.

11 Ibid. p. 20

12 Kinney, Jean. *Loosening the Grip: A Handbook of Alcohol Information, Sixth Edition.* McGraw-Hill Higher Education. 2000. pp. 365-366.

13 Ibid. pp. 366-367.

14 Gliksman, Louis; Adlaf, Edward; Demers, Andrée; Newton-Taylor, Brenda; Schmidt, Karen. Centre for Addiction and Mental Health. "Canadian Campus Survey, Executive Summary." April 2000. See: www.camh.net/press_releases/canadian_campus_survey_es.html

15 Centre for Addiction and Mental Health. "First National Study of Drug Use Among University Students Released by the Centre for Addiction and Mental Health Shows 'Heavy' Drinking to be a Significant Concern." Press Release. March 29, 2000. Toronto, ON. See: www.camh.net/press_releases/can_campus_survey_pr29300.html

16 Centre for Addiction and Mental Health, supra, n. 14.

17 Ibid.

18 Ibid.

19 Center for Substance Abuse Research, University of Maryland, College Park, CESAR FAX, August 16, 1999, Vol. 8, Issue 33. "Frequent Binge Drinkers Account for Majority of Alcohol Consumed by U.S. College Students."

20 *Annual Statistical Review.* Addictions Foundation of Manitoba. 2000-01. p. 286.

21 Ibid. p. 254.

22 Ibid. p. 257.

23 *Annual Statistical Review.* Addictions Foundation of Manitoba. 1996-97. p. 219.

24 *Annual Statistical Review,* supra, n. 20, p. 279.

25 Ibid. pp. 279-281.

26 Ibid. p. 268.

27 Ibid. p. 267.

29 According to analysis done by AFM's Research Unit.

29 Interview with Laura Goossen, Supervisor of Youth Community Based Services at Addictions Foundation of Manitoba.

30 Annual Statistical Review, supra, n. 20, p. 272.

31 Ibid. p. 264.

32 Ibid. pp. 274-275.

Chapter 5
Alcohol & Seniors

1 Addictions Foundation of Manitoba. *Seniors and Addictions: Participant's Manual.* Draft Regional Resource Guide. December 2001.

2 Manitoba Bureau of Statistics (1999). *Manitoba Population Projections 1996-2031.* Figures provided by David Greenwood.

3 Aging in Canada. *Alcohol and Seniors: What is Typical Drinking for Seniors?* See: www.agingincanada.ca/Seniors%20Alcohol/1b1.htm

4 Ibid.

5 *Canadian Profile: Alcohol, Tobacco and Other Drugs 1999.* Centre for Addiction and Mental Health, Addiction Research Foundation and Canadian Centre on Substance Abuse. p. 41.

6 Aging in Canada, supra, n. 3.

7 Ibid.

8 *Canadian Profile,* supra, n. 5, p. 54.

9 Addictions Foundation of Manitoba, supra, n. 1.

10 Kinney, Jean. *Loosening the Grip: A Handbook of Alcohol Information, Sixth Edition.* McGraw-Hill Higher Education. 2000. p. 403.

11 Ibid. p. 398.

12 Ibid. p. 401.

13 Spencer, Charmaine. Seniors Well Aware Program (SWAP), *Seniors and Alcohol* (A collaborative effort of SWAP and the Gerontology Research Centre, Simon Fraser University). 1997. p. 3.

14 Aging in Canada. *Alcohol and Seniors: Educating Seniors about Alcohol and Health.* See: www.agingincanada.ca/Seniors%20Alcohol/1h1.htm

15 Spencer, supra, n. 13, p. 7.

16 Kinney, *Loosening the Grip,* supra, n. 10. pp. 396-7.

17 National Institute on Alcohol Abuse and Alcoholism. *Alcohol Alert.* No. 40. April 1998.

18 Ibid.

19 Addiction Research Foundation (ARF). *The Older Adult and Alcohol.*

20 Kinney, *Loosening the Grip,* supra, n. 10. pp. 396-7.

21 Addictions Foundation of Manitoba, supra, n. 1.

22 Kinney, *Loosening the Grip,* supra, n. 10. pp. 396-7.

23 National Institute on Alcohol Abuse and Alcoholism, supra, n. 17.

24 Alberta Alcohol and Drug Abuse Commission (AADAC). *Alcohol and Seniors.* October 2000. See: www.gov.ab.ca/aadac/addictions/abc/alcohol_seniors.htm

25 Kinney, *Loosening the Grip,* supra. n. 10. p. 400.

26 Addictions Foundation of Manitoba, supra, n. 1.

27 National Institute on Alcohol Abuse and Alcoholism, supra, n. 17.

28 Ibid.

29 Addictions Foundation of Manitoba, supra, n. 1.

30 Ibid.

31 Spencer, supra, n. 13.

32 *Annual Statistical Review.* Addictions Foundation of Manitoba. 2000-01, p. 118.

33 Addictions Foundation of Manitoba, supra, n. 1.

34 Ibid.

35 Ibid.

Chapter 6
ALCOHOL & THE FAMILY

1 Beaudoin, Carole M. *Differences Among AFM Clients with Respect to History of Parental Alcoholism.* Alcohol and Tobacco Research Unit, Department of Community Health Services, Faculty of Medicine, University of Manitoba. p. 2.

2 *Alcohol and Health: From the Secretary of Health and Human Services September 1993.* U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute on Alcohol Abuse and Alcoholism. p. 62.

3 Kinney, Jean. *Loosening the Grip: A Handbook of Alcohol Information, Sixth Edition.* McGraw-Hill Higher Education. 2000. p. 224.

4 Beaudoin, supra, n. 1, p. 14.

5 Ibid. p. 8.

6 Kinney, supra, n. 3, p. 217.

7 Ibid. p. 224.

8 Ibid.

9 Ibid.

10 Beaudoin, supra, n. 1, pp. 12-13.

11 Statistics Canada. *Wife Assault: The Findings of a National Survey.* Jouristat Service Bulletin, Cat 85-002 14 (9) p.11, 1994. As referenced in LINK Educational Package: Violence Against Women & Children in Relationships and the Use of Alcohol & Drugs. Addiction Research Foundation. Toronto, Ontario. 1995. Module 3, p. 3.

12 Health Canada. *The National Clearinghouse on Family Violence: Family Violence and Substance Abuse Fact Sheet.* 1994.

13 *Annual Statistical Review.* Addictions Foundation of Manitoba. 2000-01. p. 213.

14 Ibid. p. 214.

15 Ibid. p. 217.

16 Ibid. p. 218.

Chapter 7
FETAL ALCOHOL SYNDROME

1 Szabo, Paul, M.P. *Fetal Alcohol Syndrome: The Real Brain Drain.* March 2000. pp. 4, 6.

2 Streissguth, Ann. *Fetal Alcohol Syndrome: A Guide for Families and Communities.* University of Washington, Fetal Alcohol and Drug Unit. Seattle. 1997.

3 Mayer, Lorna, ed. *Living and Working with Fetal Alcohol Syndrome / Effects.* Interagency FAS/E Program: Winnipeg. 1999.

4 National Institute on Alcohol Abuse and Alcoholism and Office of Research on Minority Health (NIAAA). *Identification of At-Risk Drinking and Intervention with Women of Childbearing Age: A Guide for Primary-Care Providers.* U.S. 1999. p. 7.

5 Ibid.

6 Thordarson, Deb; Braun, Lia. *Making the Right Choices: A Grade 5-8 Fetal Alcohol Syndrome Prevention Curriculum.* Frontier School Division No. 48 and Manitoba Education, Training and Youth. September 2001.

7 NIAAA, supra, n. 4, pp. 7-9.

8 Ibid. pp. 9-10.

9 Sood, Breena; Delaney-Black, Virginia; Covington, Chandice; Nordstrom-Klee, Beth; Ager, Joel; Templin, Thomas; Janisse, James; Martier, Susan; Sokol, Robert J. *Prenatal Alcohol Exposure and Childhood Behavior at Age 6 to 7 Years: I. Dose-Response Effect.* The American Academy of Pediatrics website at www.pediatrics.org/cgi/reprint/108/2/e34.pdf

10 McMillan, Jenelle. *What Everyone Should Know About Alcohol and Pregnancy.* Vancouver Aboriginal Friendship Centre Society. 1999.

11 Ibid.

12 Van Bibber, Marilyn. *It Takes a Community: A Resource Manual for Community-based Prevention of Fetal Alcohol Syndrome and Fetal Alcohol Effects.* Aboriginal Nurses Association of Canada. 1997. pp. 19-20.

13 Ibid.

14 Thordarson, D., supra, n. 6.

15 Szabo, supra, n. 1, p. 4.

16 Health Canada. *Best Practices: Fetal Alcohol Syndrome/Fetal Alcohol Effects and the Effects of Other Substance Use During Pregnancy.* Prepared by Gary Roberts and Jo Nanson for Canada's Drug Strategy Division. December 2000. p. 12.

17 Thordarson, supra, n. 6.

18 Szabo, supra, n. 1, p. 17.

19 NIAAA, supra, n. 4. p. 9.

20 Boland, Fred J.; Burrill, Rebecca; Duwyn, Michelle; Karp, Jennifer. *Fetal Alcohol Syndrome: Implications for Correctional Service.* Correctional Service of Canada. July 1998.

21 Ibid.

22 Ibid.

23 Szabo, supra, n. 1.

24 BC FAS Resource Society. *B.C. FAS Community Action Guide: Working Together for the Prevention of Fetal Alcohol Syndrome.* British Columbia Ministry for Children and Families. October 1998. p. 21.

25 Van Bibber, supra, n. 12, pp. 21-22.

26 Ibid.

27 Schneider, Barb. *Alcohol-related Birth Defects, AADAC Drayton Valley Area Office.* Crossroads Regional Health Authority, The Society for the Coalition of Rural Representatives from Breton and Buck Creek, Brighter Futures. Alberta: 1999. p. 8.

28 McMillan, supra, n. 10.

Chapter 8

Drinking & Driving

1 Traffic Injury Research Foundation website. www.trafficinjuryresearch.com/faq/faq/htm

2 Ibid.

3 Weinrath, Michael; Kaplan, Gerry. *A Summary of Research Findings on Alcohol's Effects on Driving, and the Relationship Between Fatal Crash Risk and Blood Alcohol Concentration.* Addictions Foundation of Manitoba. August, 1999. p. 5-6.

4 Transport Canada. *Smashed Magazine: The Magazine on Drinking and Driving.* "That Wasn't Me...Was it?: Turning a Car Into a Two-ton Weapon." Posted on website February 26, 2002. www.tc.ca/roadsafety/tp1535/pdf/smashed.pdf

5 Weinrath, supra, n. 3, p. 22.

6 Beirness, Douglas J.; Simpson, Herb M.; Mayhew, Daniel R.; Pak, Anita. *The Road Safety Monitor: Drinking and Driving.* Traffic Injury Research Foundation, Ottawa, Ontario. December 2001.

7 Canadian Institute for Health Information's website: www.cihi.ca/medris/24jan2002.shtml

8 "Setting the Record Straight: on the Number of People Killed in Alcohol-related Crashes." Traffic Injury Research Foundation website: www.trafficinjuryresearch.com

9 *Traffic Collision Statistics Report.* Manitoba Transportation and Government Services. 1999. p. 37.

10 Ibid. p. 83.

11 Ibid. p. 84.

12 Beirness, Douglas J. "Alcohol Involvement in Snowmobile Operator Fatalities in Canada." *Canadian Journal of Public Health.* September-October 2001. p. 359.

13 *Traffic Collision Statistics Report,* supra, n. 9, p. 102.

14 Ibid. p. 101.

15 Ibid. p. 110.

16 Beirness, supra. n. 6, p. 4.

17 Beirness, D.J. "Lowering the BAC Limit: A Canadian Perspective." Traffic Injury Research Foundation website: www.trafficinjuryresearch.com/publications/pub-details.cfm?intPubID=108

18 Ibid.

19 The Manitoba Highway Traffic Act, fact sheet entitled "New Licence Suspensions for Impaired Driving and Auto Theft."

20 Ibid.

21 Ibid.

22 The Manitoba Highway Traffic Act, chart entitled "Consequences of Impaired Driving."

23 "Manitoba Graduated Driver Licencing Program: Questions and Answers." Manitoba Transportation and Government Services website: www.gov.mb.ca/tgs/leg/gdlqa.html

ANSWERS TO QUICK QUIZ

(Check your score from the questions on page 19)

QUESTION #1
False. A 355 ml bottle of beer, a 150 ml glass of wine, or a mixed drink with 45 ml of spirits all have equal alcohol content and can affect you in the same way.

QUESTION #2
False. Alcohol affects each one of us differently depending on our mood, what we've eaten, our size and weight, medications and other factors. In some cases, less than three drinks can put us over the .08 limit. Nevertheless, even being below the limit of .08 can result in an impaired driving charge. The best way to prevent being charged is not to use alcohol at all before driving a vehicle.

QUESTION #3
True. Even small quantities of alcohol can affect our side vision, as well as our sense of caution.

QUESTION #4
False. An evening of heavy drinking can stay with you right into the morning. Eight or nine hours after downing your last drink, your ability to drive may still be impaired and you can be at risk of an impaired driving charge.

QUESTION #5
False. Each person's body processes alcohol at an individual fixed rate whether we're sleeping or mountain-climbing. Therefore, driving home would be no safer for the man in the example than if he'd been drinking and not building the fence.

QUESTION #6
True. Considerable scientific research has reported that there are health benefits from moderate drinking. These studies show that moderate drinking may reduce the risk of coronary heart disease, which is one of the leading causes of death in this country. So, a drink or two can be good for you. But if you have questions about alcohol consumption or your medical condition, consult your doctor before drinking.

QUESTION #7
False. Alcohol can help you get to sleep by relaxing you, but it interferes with restful sleep – you can wake up feeling edgy. That nervousness can get worse the more you rely on alcohol to get to sleep.

QUESTION #8
False. It's the amount of alcohol and the speed at which you drink it that makes you drunk. Eating doesn't change the quantity of alcohol that ends up in the bloodstream – it simply delays its impact and, therefore, its effects. However, it may be healthier to eat when you're having an alcohol drink.

QUESTION #9
True. Drinking a great deal of alcohol in a short time can actually poison the body. Although rare, the effects can be fatal.

QUESTION #10
We don't know for sure. More and more scientific literature shows that moderate drinkers may have lower mortality rates. Depending on such factors as amount consumed, some people may benefit from small amounts of alcohol while others may not. Researchers do not say, however, that non-drinkers should start drinking in order to achieve health benefits.

QUESTION #11
True. A drink before a get-together can help us be more outgoing. Relying on drinks in stressful situations, however, doesn't get at the real problem and can become a habit.

QUESTION #12
False. Skill-testing exercises like these can give us an idea of our ability to perform, but they're too simple to tell us if we're okay to drive or carry out some other precise skill. Impairment of driving abilities starts at low consumption levels.

QUESTION #13
True. Alcohol may help some people relax by making them feel more comfortable or less inhibited. But we can be tempted to drink too much to calm our nerves. We can begin to rely on drinking every time we're facing stress.

QUESTION #14
True for some people, false for others. Many people find that wine's taste, colour and bouquet improve the eating experience. However, wine contains the same alcohol as beer and spirits, so the amount we drink and the circumstances in which we drink have to be taken into account.

QUESTION #15
True. We think that drinking is our business, but we set examples and create impressions with our behaviour. Children who see us drink irresponsibly may assume this behaviour is okay. And co-workers or employers might jump to conclusions about our character based on an episode of excessive drinking.

QUESTION #16
True. Alcohol doesn't just affect our bodies. Drinking can change how we see the world around us and the decisions we make about our behaviour in that world.

QUESTION #17
False. Patent drugs, including pain relievers and decongestants that don't require a prescription, contain chemicals which can react with alcohol. The result can be side effects, such as breathing difficulties, drowsiness, irritation of stomach and small intestine and loss of judgement.